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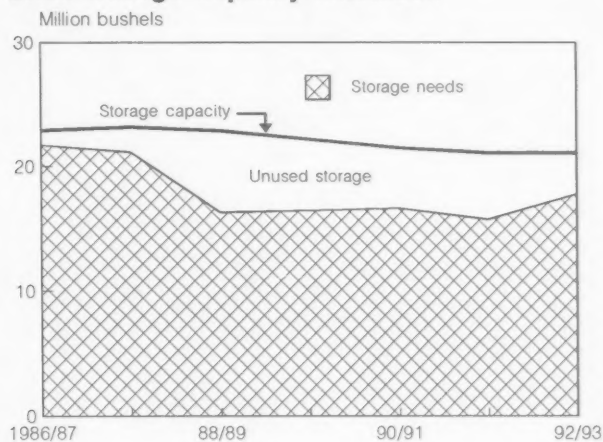
Economic
Research Service

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Feed

Situation and Outlook Yearbook

Grain Storage Capacity Utilization



Storage space tightens,
but remains adequate

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Summary

Feed Grain Production in 1992/93 To Rise on Record Yields

Total 1992/93 U.S. feed grain production is forecast at 273.5 million tons. This is less than 1 million below the previous record set in 1985/86, when harvested area was more than 15 million acres larger. Record yields are forecast for each crop with corn at 129.3 bushels per acre, sorghum at 71.2, barley at 62.4, and oats at 65.6. Not since 1965 have all four grains experienced record yields during the same year.

Relatively mild temperatures during the growing season and above normal rainfall since July have led to late maturing crops. As a result, harvesting lags well behind normal. As of November 22, corn harvest was just 69 percent complete in the 17 major producing States compared to the average of 97 percent. Grain sorghum harvest, at 83 percent complete, was 12 percent behind the average.

The large 1992/93 crops have boosted forecast feed grain supplies to 308.7 million tons, 15 percent above a year ago and the largest since 1987/88. The larger supplies have dampened farm prices. Prices received by farmers for corn during September averaged \$2.15 per bushel off \$0.18 from a year earlier. By mid-October corn prices had declined further to \$1.99 per bushel.

Lower feed grain prices will encourage higher domestic disappearance in 1992/93. Larger meat output projected for calendar 1992 and 1993 and higher feed grain supplies are expected to boost feed and residual use of feedgrains to 152.4 million tons, up more than 10 million from 1991/92. Carbon monoxide reduction program in major U.S. cities this winter are largely responsible for production; boosting food, seed, and industrial use of corn.

World trade of coarse grains is forecast to decline 6 percent in 1992/93, due mainly to reduced imports by the former Soviet Union and large feed wheat exports from Canada. However, U.S. feed grain exports are forecast up 1 million tons to 50.7 million because of the lower U.S. prices and some competitors' reduced supplies.

Thus, total 1992/93 feed grain disappearance is forecast at a record 246.6 million tons, up 12.5 million from a year

earlier. However, with a 55-million-ton increase in production, 1992/93 ending stocks are forecast to rise to 62.1 million. Ending stocks of corn are expected to almost double the carryin level and exceed 2.1 billion bushels. However, corn stocks will remain well below the 4 to 4.8 billion bushels of the mid-1980's. Thus, season-average farm prices for corn are forecast between \$1.85 and \$2.15 per bushel, down from \$2.37 last year.

FEED GRAIN SUMMARY

Year 1/	88/89	89/90	90/91	91/92 Est.	92/93 Proj.	Record prod. 2/ 85/86	Lowest stocks 2/ 75/76
TOTAL FEED GRAINS						Mil. acres	
Planted	101.8	106.1	103.4	104.6	108.6	128.0	122.6
Harvested	80.6	91.0	89.5	91.9	96.2	111.7	104.7
Yield (ton/ac)	1.85	2.43	2.58	2.38	2.84	2.46	1.77
Beg. stocks						Mil. metric tons	
Production	133.6	65.9	45.5	47.7	34.0	57.5	21.1
Supply	149.3	221.0	230.5	218.2	273.5	274.3	185.1
	284.2	288.2	277.3	268.0	308.7	332.6	206.5
Dom. Disp.	157.2	173.0	178.1	184.4	195.9	170.0	133.7
FSI	38.7	40.3	40.5	42.2	43.6	35.0	17.9
Feed/res.	118.5	132.7	137.6	142.2	152.4	135.1	115.8
Exports	61.1	69.7	51.5	49.7	50.7	36.1	48.8
End. stocks	65.9	45.5	47.7	34.0	62.1	126.4	23.9
=====							
SECTOR	Corn		Sorghum		Barley		Oats
Year 1/	91/92	92/93	91/92	92/93	91/92	92/93	91/92 92/93
Planted							
	76.0	79.3	11.0	13.5	8.9	7.8	8.7 8.0
Harvested							
	68.8	72.1	9.8	12.3	8.4	7.3	4.8 4.5
Yield							
(bu/ac)	108.6	129.3	59.0	71.2	55.2	62.4	50.7 65.6
Beg. stocks							
	1,521	1,100	143	53	135	129	171 128
Production							
	7,474	9,329	579	878	464	456	243 295
Supply							
	9,015	10,439	722	931	624	605	489 462
Dom. disp.							
	6,331	6,685	377	510	401	365	360 360
FSI							
	1,434	1,485	9	10	171	170	125 130
Feed/res.							
	4,897	5,200	368	500	230	195	235 230
Exports							
	1,584	1,600	291	300	95	110	2 2
End. stocks							
	1,100	2,154	53	121	129	130	128 100
Stocks-use							
ratio, %	13.9	26.0	8.0	14.9	25.9	27.3	35.3 27.7
Avg. farm							
price, \$/bu	2.37	1.85- 2.15	2.25	1.75- 2.05	2.10	2.00- 2.20	1.20 1.25- 1.35

1/ Corn and sorghum, September/August; barley and oats, June/May.
2/ Based on corn since 1975/76, excluding the current forecast.

Feed Grain Supplies in 1992/93 Boosted by Record Yields

For the first time since 1965, all four feed grains registered record yields, producing the second largest feed grain crop at 273.5 million tons. In spite of the lowest carryin stocks since 1976/77, 1992/93 feed grain supplies of 308.7 million tons is the fifth largest on record.

Although there was concern about dry conditions in some areas in early summer, few States experienced less than good overall growing conditions. Favorable rainfall and below normal temperatures combined to produce record crop yields in many States. For corn, 21 States tied or exceeded their previous record. Forecast national average corn yields of 129.3 bushels per acre exceeded the 1987 record by 9.5 bushels. Ten of 18 States reported grain sorghum yields topping or matching their previous mark, including 5 of the 6 largest producing States. The forecast national average sorghum yield of 71.2 bushels per acre tops the previous record of 69.4 bushels in 1987.

National barley yields averaged 62.4 bushels per acre, 5.2 bushels above the record set in 1982. In North Dakota, the largest barley producing State, average yields of 65 bushels per acre surpassed its previous mark by 10 bushels. National average oat yields are 2 bushels above the 1985 record of 63.6 bushels per acre. Thus, the 1992/93 average feed grain yield is forecast at 2.84 tons per acre, compared to the previous record of 2.57 tons in 1990.

Feed grain stocks, at 34 million tons, are at the lowest carryin level since 1976/77. However, near record output will push feed grain supplies up 15 percent to almost 309 million tons, the largest since 1987/88.

Feed Grain Use To Expand; But Stocks Build

Larger feed grain supplies will allow greater feed grain disappearance in 1992/93. Feed and residual use is forecast to jump over 10 million tons as livestock sector expansion continues in the red meat and poultry sectors. Food, seed, and industrial (FSI) uses are also forecast to increase as larger alcohol use in blended fuels expands industrial use. Exports of feed grains are forecast to increase only modestly to 50.7 million tons. In total, disappearance of feed grains is expected

to approach 247 million tons, up 12.5 million tons from last year.

Although total use of feed grains is expected to be a record, ending 1992/93 stocks are forecast to exceed 62 million tons. This is an 83 percent increase in just 1 year, and the highest in 4 years.

The spectacular rebound in corn stocks forecast for 1992/93 has led to a higher acreage reduction requirement for the 1993/94 corn program. The set aside (ARP) rate for corn has been increased to 10 percent from this year's rate of 5 percent. Discretionary authority under the General Agreement on Tariffs and Trade (GATT) trigger provisions was used to waive the legal minimum of 7.5 percent ARP rate for grain sorghum and barley. The waiver was necessary to assure adequate domestic supplies and maintain competitiveness in export markets. For sorghum, the ARP remains unchanged at 5 percent due to record low 1992/93 carryout stocks and continued strong import demand from Mexico. Tight supplies of barley has led to a 0 percent set-aside rate for barley. A 0 percent set-aside rate was legislated throughout the 5-year coverage of the 1990 farm bill for oats.

The loan rate for each feed grain in 1993/94 remains unchanged from 1991/92, with corn at \$1.72 per bushel, \$1.63 for sorghum, \$1.40 for barley, and \$0.87 for oats. Also, target prices remain unchanged at \$2.75 for corn, \$2.61 for sorghum, \$2.36 for barley, and \$1.45 for oats. Farmers may sign-up to participate in the 1993 feed grain program between March 1, 1993 and April 30, 1993. At sign-up, farmers may request 50 percent of their estimated deficiency payments. Estimated deficiency payment rates have not yet been announced but will be prior to the sign-up period.

[Tom Tice, (202) 219-0840]

Forecast 1992 Corn Production Shatters Previous Record

Below normal temperatures and above normal precipitation since early summer enabled the corn crop to proceed through the reproductive stage under mostly good to excellent conditions. As a result, corn yields in many States are forecast at record levels.

Late Maturing Crop Reaches Potential

The corn crop is forecast at 9,328.9 million bushels for 1992/93, surpassing the previous record by more than 450 million, and 25 percent larger than last year. Total production in the Illinois, Indiana, Iowa, Missouri, and Ohio is up 40 percent to 5,135 million bushels compared to a year ago.

The average corn yield is forecast at 129.3 bushels per acre, 20.7 bushels above 1991 and 9.5 bushels higher than the record set in 1987. Record yields are forecast for 21 States including 11 of the 17 States that produced over 94 percent of the 1991/92 crop. Only 3 States have forecast yields at less than 90 percent of their previous record. These States, Arkansas, North Dakota, and Oregon, account for less than 1 percent of forecast U.S. production. Thus, crop conditions were quite favorable in nearly all producing regions.

In conducting objective yield surveys, NASS collects plant populations per acre, number of ears per acre, and average ear weights. Data from these samples were summarized in the November Crop Production report and reveal why many states experienced record yields. Of 10 major corn producing States surveyed, 5 reported record large plant populations. Furthermore, the average number of ears per acre was record large in all 10 States.

While record yields are forecast, much of the corn crop remains to be harvested. For the week ending November 22, only 69 percent of the corn crop had been harvested compared with the previous 5-year average of 97 percent. In Minnesota, Although cool temperatures slowed maturing, most areas avoided extensive crop losses due to early frost. Wisconsin,

and Michigan only 56 percent of the crop was harvested, while in Illinois, Indiana, Iowa, Missouri, and Ohio 70 percent of the area was harvested.

Large Corn Supplies To Weigh on Prices

Corn supplies for 1992/93 are forecast at 10,439 million bushels, up 16 percent from last year, but still 1,828 million bushels below the record supplies of 1986/87. The larger supplies will weigh on corn prices as the harvest progresses. Already, mid-month farm prices dipped to \$1.99 per bushel for October.

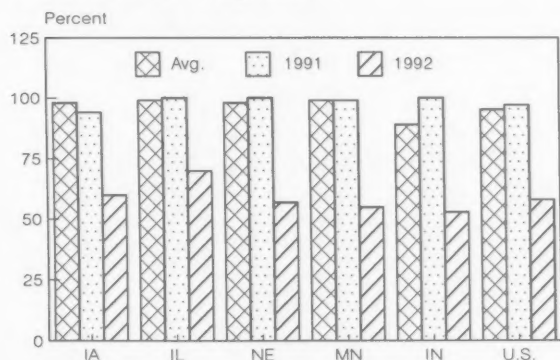
Lower corn prices in 1992/93 are expected to improve use, as livestock feeding returns are supported by lower feed costs. Both larger livestock inventories and higher implied feeding rates are expected to boost demand for corn. Feed and residual disappearance is forecast at 5,200 million in 1992/93, up over 300 million from last year's record.

FSI use of corn is also forecast to increase in 1992/93. The implementation of the Clean Air Act requires 39 cities to use oxygenated fuel during the winter months to reduce carbon monoxide emissions. Ethanol, an oxygen rich fuel, is being blended into gasoline to help automobile emissions meet EPA standards. Total FSI use is projected to reach 1,485 million bushels, up from 1,445 million last year.

Although corn prices are forecast lower, corn exports will only improve marginally. World trade of coarse grains is forecast to fall 6 percent in 1992/93. Reduced imports for the FSU and large supplies of feed wheat in Canada are major factors reducing world coarse grain trade. However, reduced

Figure 1

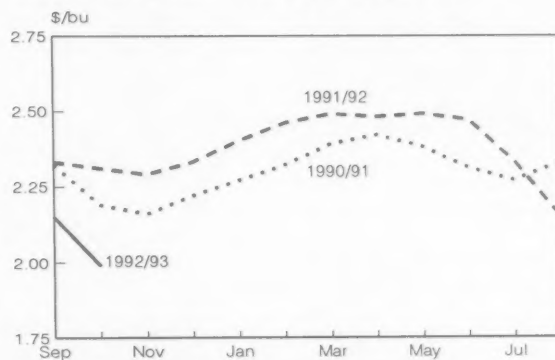
Corn Harvest Progress



Week ending November 22, 1992.

Figure 2

Corn Prices Received by Farmers



competitor supplies will allow U.S. market share of world trade to increase. As a result, corn exports are forecast up at 1,600 million bushels compared to 1,584 million in 1991/92.

Although total use of corn is projected to reach 8,285 million bushels, ending stocks are forecast to rise to 2,154 million bushels, representing 26 percent of use. Thus, prices received by farmers are forecast to average between \$1.85 and \$2.15 per bushel for 1992/93, down from last year's \$2.37.

June-August Corn Use Sets Record

Strong export shipments and feed and residual use of corn during the last quarter of 1991/92 helped boost total use to 1,641 million bushels. This exceeds the 1991/92 June-August quarter use by nearly 170 million bushels and also exceeds the previous record of 1,610 million in 1979/80. Feed and residual disappearance of 842 million bushels is the largest June-August use since 1987/88 and 154 million above a year earlier. In addition, exports of nearly 70 million bushels to southern Africa nations hit by drought supported the year-over-year increase in quarterly trade.

The large June-August use of corn pushed total 1991/92 use to 7,915 million bushels, 440 million bushels above production. As a result, September 1 stocks declined to 1,100 million bushels, their lowest level since 1983/84. The simple average of prices received by farmers during the June-August quarter

Table 1--Corn supply, disappearance, and stocks, Jun.-Aug.

Item	1990/91	1991/92
Million bushels		
Supply:		
Beginning stocks, June 1:	2,992.0	2,738.6
CCC	435.9	147.2
FOR	29.0	0.2
Loan	638.9	589.3
Uncommitted	1,888.2	2,001.9
Imports (Jun.-Aug.)	1.5	3.3
Total supply	2,993.4	2,741.9
Disappearance:		
Food, seed, & industrial	349.6	369.1
Exports	419.4	429.7
Feed and residual	703.5	842.6
Total use	1,472.6	1,641.4
Ending stocks, Sept. 1:		
CCC	371.1	112.5
FOR	2.6	0.0
Loan	211.1	198.4
Uncommitted	936.1	789.6
Total	1,520.9	1,100.5

Totals might not add because of rounding.

was \$2.32/bushel, slightly above the \$2.30 received a year earlier.

[Tom Tice, (202) 219-0840]

Sorghum Production Rebounds on Record Yields

Record sorghum yields, forecast at 71.2 bushels per acre, and a 2.5 million acre increase in harvested area boosted forecast production to 877.5 million bushels. This would be the largest sorghum crop since 1986/87 when 13.9 million acres were harvested (1.6 million above this year).

Favorable growing conditions have produced record sorghum yields in 10 of the 18 reporting States with 5 of the top 6 States matching or exceeding their previous record. Texas, the largest producing State, fell short of its previous record by 3 bushels per acre. Potential yields there were likely reduced by approximately 1 million acres of late planted sorghum on abandoned cotton acreage. The forecast national yield of 71.2 bushels per acre exceeds the record set in 1987 by nearly 2 bushels per acre.

Supplies Boosted by Large Crop

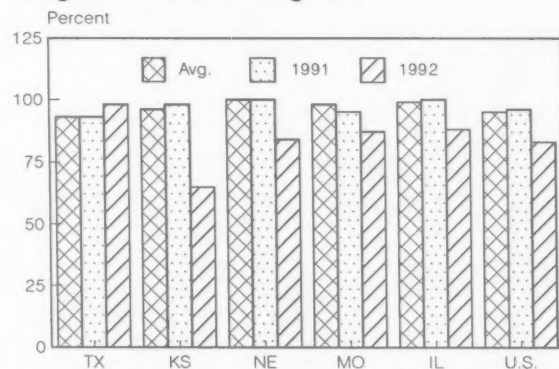
Record-low carryin stocks of sorghum will keep 1992/93 supplies below 1 billion bushels in spite of the larger harvest this fall. September 1 sorghum stocks of 53.2 million bushels were nearly a third of those a year earlier. However, this year's forecast sorghum supplies of 930.7 million bushels are well above levels of the previous 2 years.

The larger supplies of sorghum combined with the large corn crop are expected to weaken average farm prices. Average farm prices received by farmers for sorghum have fallen

seasonally through the summer and fall from a peak of \$2.41 per bushel in March to \$1.86 in mid-October. This represents a sharper decline than corn prices, which fell from \$2.49 to

Figure 3

Sorghum Harvest Progress



Week ending November 22, 1992.

Figure 4

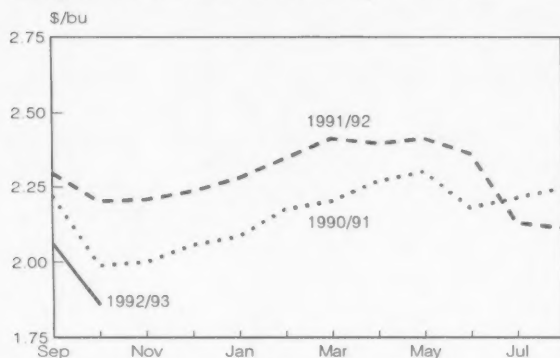
Sorghum Prices Received by Farmers

Table 2--Sorghum supply, disappearance, and stocks, Jun.-Aug.

Item	1990/91	1991/92
Million bushels		
Supply:		
Beginning stocks, June 1:	222.0	110.4
CCC	108.4	14.3
FOR	0.9	0.0
Loan	9.5	5.7
Uncommitted	103.2	90.4
Total supply	222.0	110.4
Disappearance:		
Food, seed, & industrial	2.5	2.4
Exports	38.2	32.0
Feed and residual	38.8	22.9
Total use	79.4	57.2
Ending stocks, Sept. 1:		
CCC	64.7	8.2
FOR	0.0	0.0
Loan	3.4	7.4
Uncommitted	74.5	37.6
Total	142.6	53.2

Totals might not add because of rounding.

a sharper decline than corn prices, which fell from \$2.49 to \$1.99 per bushel over the same period. By November 1, 61 percent of the sorghum crop had been harvested compared to just 44 percent for corn. Thus, a larger portion of the forecast sorghum supplies were available to the cash market. Season-average sorghum prices are forecast between \$1.75 and \$2.05 per bushel, down from the \$2.25 average last year.

Lower Prices To Encourage Larger Use

The lower sorghum prices for 1992/93 are expected to encourage larger use. Exports are forecast to reach 300 million bushels, up from 291 million a year ago as strong demand from Mexico continues. Feed and residual use is forecast at 500 million bushels, up 132 million. Larger inventories of cattle on feed in the Southern Plains, lower feed prices, higher wheat prices, and the close proximity to the sorghum crop are factors supporting feed use.

June-August Use Limited by Low Stocks

Sorghum stocks were reported at 110.4 million bushels on June 1, 1992, the lowest June 1 stocks on record. Low stocks limited total disappearance during the June-August quarter to 57.2 million bushels. However, sorghum stocks dipped to a year-end record low level of 53.2 million bushels on September 1, 1992.

Despite the sorghum draw-down to record lows, prices weakened during the quarter on prospects of impending large feed grain production. Farm prices declined from \$2.47 per bushel in June to \$2.16 in August. Average farm prices for the 1991/92 year are estimated at \$2.25 per bushel, up from \$2.12 for 1990/91.

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Barley Yields Break 10-Year Record

Excellent growing conditions lead to new yield records in many States. However, lower harvested acres drop production.

Barley production for 1992/93 is estimated at 456 million bushels, down marginally from the previous year, but 34 million bushels above the 1990/91 outturn. Record yields were more than offset by a decline in both the planted and harvested acres—the opposite directions taken by yields and acres in 1991/92. The 1992 estimated barley yield is 62.4 bushels per acre, up from 55.2 bushels in 1991, and over 5 bushels above the previous record of 57.2 bushels per acre set in 1982. Harvested acres fell to 7.3 million, 1.1 million (13 percent) below last year.

Good conditions during the growing season permitted record barley yields in 12 States. North Dakota, representing 38 percent of the National total, was again the largest barley-producing State, even though the State's harvested area fell by almost 200,000 acres from a year earlier. Their statewide yield of 65 bushels per acre shattered the previous record by 10 bushels. Among the top five barley producing States, four set new yield records in 1992. In addition to North Dakota, the list includes Idaho, Minnesota, and South Dakota. Only Montana, suffering from drought conditions ranging from moderate to extreme, failed to exceed its previous high mark. With Minnesota and North Dakota's barley crops mostly malting quality, 1992 malting barley production is expected to increase.

Production Decline Reduces Supplies in 1992/93

Barley stored in all positions on September 1, 1992, totaled 415.3 million bushels, down about 25 million bushels from a year earlier. On farm storage fell from 271 million bushels to only 259 million. Off farm storage declined from about 169 million bushels to just over 156 million.

Not surprisingly, in 1992/93 once again North Dakota had more barley in storage on September 1 than other States—with 143 million bushels in all positions, versus 156 million a year earlier. Minnesota stocks rose from 60.9 million bushels last year to 67.4 million bushels in 1992. Montana's relatively poor barley crop this year was bolstered by June 1 inventories of 18.4 million bushels, an increase of 58 percent more than on June 1, 1991. However, stocks on September 1 were down this year at 45.8 million bushels compared to 73.3 million a year earlier.

Average farm prices for all barley for the 1992/93 June-May crop year are forecast at \$2.00-\$2.20 per bushel, about the same as the 2 previous years (\$2.10 in 1991/92 and \$2.14 in 1990/91). Prices have fallen since peaking in 1988 at \$2.79 per bushel. The average price received by farmers for malting

barley in 1991/92 was up 7 cents from a year earlier to \$2.40 per bushel. In contrast, feed barley prices received declined about 4 cents to average \$1.92 per bushel. This meant the premium for malting quality barley increased from 37 cents per bushel in 1990/91 to 48 cents last year.

By early fall, monthly malting barley prices received by farmers were well below a year earlier. The September and October 1992 reported prices received by farmers were \$2.12 and \$2.17 cents per bushel, 49 cents lower than a year earlier. Feed barley prices began the crop year with higher monthly prices, but followed the malting barley pattern with lower September and October prices. October's preliminary price of \$1.83 per bushel was 7 cents lower than that of a year earlier.

Feed and residual disappearance for the 1992/93 crop year is forecast at 195 million bushels, down 35 million from the 1991/92 total, but only 10 million below the 1990/91 level of 205 million bushels. First quarter (June-August) 1992/93 feed and residual use amounted to almost 113 million bushels, almost 5 million bushels more than the same period one year earlier. However, it will slow during the remainder of the crop year as supplies tighten. Food, seed, and industrial (FSI) use is projected to remain relatively steady in 1992/93 at 170 million tons. However, FSI use during the first quarter of 1992/93 totaled only 45 million bushels, about the same as the average first quarter over the previous 6 years.

Barley exports are expected to reach a relatively strong 110 million bushels during the 1992/93 crop year. This is 15 million bushels more than in 1991/92, and 29 million more than 1990/91. U.S. barley exports will likely be bolstered by lower output in Canada, Finland, and Sweden, which will seriously reduce their barley exports. Even though barley outturn for the EC-12 is down 15 percent in 1992/93, record large carryin stocks will permit exports to expand and amount to over half of the projected world trade, excluding intra-EC sales.

Total use in 1992/93 is projected at 475 million bushels, down from 496 million bushels last year. By the end of the crop year (May 31, 1993), barley inventories, at 130 million bushels are projected to approximate the 1991/92 level and be about only 5 million below the 1990/91 level. If so, the resulting stocks-to-use ratio will be 27 percent, compared with 26 percent last year, and 29 percent in 1990/91.

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Oats Yield in 1992/93 Breaks 7-Year Record

*Yield strength leads to a production gain of 50 million bushels.
Harvested acres reach new low.*

U.S. oats production in 1992 reversed a trend of annual production declines and registered an increase for the year. The outturn is estimated to reach 295 million bushels, 21 percent above the 1991's level of 243 million, but well below the 358 million in 1990. Oats acreage continued to decline in 1992, with only 4.5 million acres harvested for grain. This is down from 4.8 million in 1991/92 and 5.9 million in 1990/91. However, record yields of 65.6 million bushels per acre more than offset the lower area. The previous yield record was set in 1985 at 63.6 bushels per acre. Had this year's yields been as low the previous year, outturn would have begun to approach 1988's drought-reduced record-low crop.

Each of the top three oats-producing States had record yields in 1992. South Dakota continues to grow more oats than any other State, with 42.9 million bushels and yields of 66.0 bushels per acre. North Dakota yields were 68.0 bushels per acre (19 percent above the previous record), while Minnesota oats yields were higher at 70.0 bushels per acre, (tying the record). The acres harvested as oats for grain this year were down in all three States. Combined, these three make up almost 40 percent of the total U.S. output. All in all, 14 States either met or exceeded previous oats yield records this year. Both Wisconsin and Iowa, which rank among the Nation's leaders in oats outturn, had good crop yields, but fell short of previous highs.

Oats Supplies Continue To Fall

September 1, 1992, stocks of oats held both on farm and off farm are estimated at 288.9 million bushels, almost 5 million above the 1991 level. By the end of the oats crop year (May 31, 1993) inventories are projected to fall to only 100 million bushels, a 22 percent reduction from 1 year earlier. Inventories have only been lower once, in 1988/89. During the 1980's, oats ending inventories averaged 70 percent higher. With oats prices expected to remain well above the loan rate of \$0.83 per bushel, almost all of the oats ending inventories

will be held as free stocks, continuing the trend of the last several years.

In 1992/93, production gains for oats were mostly offset by smaller beginning inventories. However, oats supplies are likely to be 27 million bushels lower this year than 1991/92 as a result of a significant decrease in imports, projected to fall from 1991/92's 75 million bushels to 40 million. Drought in both Sweden and Finland has sharply cut production and available supplies to export. Canada is expected to pick up some of northern Europe's diminished sales, but not all.

Oats prices received by farmers in 1992/93 are forecast to fall between \$1.25-\$1.35 per bushel, modestly higher than in recent years. This reverses the long term decline in oats prices seen during the 1980's. The prices received by farmers during the first 5 months of the May-June crop year averaged 20 cents a bushel higher this year. Reductions in world exportable supplies and concerns about the size and quality of the U.S. crop strengthened domestic prices somewhat. However, these concerns were somewhat diminished in September and October 1992, when prices received by farmers for oats averaged \$1.30 per bushel, about 14 cents per bushel above the same two months a year ago.

Use Remains Constant Despite Smaller Supplies

Even though oats supplies are expected to be about 6 percent smaller in 1992/93 than a year earlier, oats use during the year is forecast at 362 million bushels, identical to the 1991/92 total. Feed and residual use at 230 million bushels is down 5 million, or about the same as the drop during the first three months of the crop year. The 5-million-bushel reduction is expected to be made up by a similar gain in FSI use as consumers continue to expand oats in individual diets, as has been the case in the last three years. First quarter FSI use approached 31 million bushels in 1992/93, a gain of 0.5 million from last year.

[Jim Cole, (202) 219-0840]

Hay Production Falls From 1991/92 Peak

Higher alfalfa yields and marginal improvement in all other hay yields are outweighed by declines in harvested acres.

Hay supplies in the 1992/93 crop year (May-April), at 177.6 million tons, are down about 3 million from the year earlier total. Forecast production decline of 4.5 million tons (brought on by lower harvested acreage) offset stronger yields and large beginning inventories. All hay yields in 1992/93 rose to 2.47 tons per acre, up from 2.45 and 2.39 tons in each of the two previous years. Significant yield gains were registered in Colorado, Kansas, Nebraska, New York, Ohio, Oklahoma, and Pennsylvania. However, among the remaining major hay producing States, forecast yields are down more than 10 percent in Iowa, Minnesota, Missouri, North Dakota, Texas, and Wisconsin where yields declined by almost 30 percent. As a result, Wisconsin is the Nation's sixth largest hay producer in 1992/93, not the leader as in recent years.

Harvested hay acreage in 1992/93 fell to 60.4 million acres, compared to 62.6 million in 1991/92. North and South Dakota combined to account for 850,000 acres of the almost 2.2-million-acre drop. Among the largest hay-producing States, only Nebraska registered an acreage increase, but at 50,000 acres, the increase was marginal. Texas acres remained constant at 3.8 million.

Alfalfa Hay Acreage Decline Offsets Modest Yield Gains

In 1992/93, alfalfa hay is being harvested on 24.1 million acres, 1.5 million below 1991/92. Alfalfa's share of hay acreage fell slightly to 40 percent. Harvesting of all other hay is taking place on 650,000 fewer acres this year. Nationwide, alfalfa yields rose to 3.33 tons per acre (compared to 3.28 in 1991/92) while other hay yields showed a marginal gain.

Alfalfa hay and alfalfa hay mixture production in 1992/93 is forecast at 80.1 million tons, 3.5 and 3.7 million tons, respectively, below 1990/91 and 1991/92. The lower alfalfa production will have its largest impact in dairy States. In Wisconsin, last year's leader in alfalfa output, production suffered from both a yield loss (down 25 percent to 2.10 tons per acre in 1992/93) and harvested acres (down 17 percent). The two combined to reduce alfalfa production there by almost 3.2 million tons, or 37 percent. Other States with sizeable alfalfa declines in 1992/93 include California, Iowa, Minnesota, North Dakota, and South Dakota.

On the other hand, in Kansas, good growing conditions allowed both alfalfa yields and harvested acreage to rise during 1992/93, bring production to 3.3 million tons, an increase of over 800,000 tons (34 percent) from a year earlier. The same is true of Nebraska, where production rose by almost 1 million tons. In parts of the Northeast, output increased as well, including New York and Pennsylvania.

Other Hay Acres Decline, Lead to Production Decline

Output of all other hay nationwide fell in 1992/93, although at 68.8 million tons, the decline was less than 1 million tons. Yields of 1.89 tons per acre (compared with 1.88 tons in 1991/92) could not offset a 650,000 reduction in harvested acres to only 36.3 million acres. Non-alfalfa hays are typically fed to beef cattle.

Texas, by far, leads the nation in all other hay production. But production fell by over 1.1 million tons to reach only 8.1 million tons, as yields dropped from 2.5 to only 2.2 tons per acre. Production losses in 1992/93 were also registered in Missouri where both area and yields declined to reduce output to only 5.1 million tons—a drop of over 600,000 tons. North and South Dakota showed sharp production declines as well. Among the remaining major all-other-hay producing States, Oklahoma led the way with a production gain of over 500,000 tons as increased yields more than offset a modest decline in acreage.

Hay Prices Continue To Decline

Average hay prices received by farmers in 1991/92 fell to \$71.00 per ton, a decline from \$80.60 per ton in 1990/91. In 1989/90, following the 1988 drought, all-hay prices peaked at \$85.40 per ton. Although down, current prices may be falling back in line with prices during earlier years. In the 5 years prior to the drought, the average price received by farmers for all hay was \$68.16 per ton.

Alfalfa and other hay prices received by farmers each fell in 1991/92—alfalfa down 13 percent and other hay a decline of about 5 percent. This downward trend has continued through the first 6 months of the current May-April year. Prices for all hay thus far have averaged \$71.68 per ton, down from \$72.82 during the same May-October period last year. Alfalfa prices, at \$76.63, are only slightly lower, but all other hay prices are down from \$58.03 in 1991/92 to only \$56.90 this year.

The number of roughage consuming animal units (RCAU's) in 1992/93 is estimated at 78.3 million units. This is about 1.5 million units above the 1991/92 estimate, with most of the increase in beef cattle not on feed. The increased number of animals, coupled with a smaller hay crop has led to a decline in the hay supply per RCAU. Falling from 2.35 tons per RCAU to only 2.27, this is a drop of about 3 percent. This decline also reverses several years of increases.

With the large number of RCAU's on hand, hay disappearance will likely be around 150-155 million tons. If so, May 1

carryin stocks for the 1993/94 year may only reach 22-27 million tons, the lowest level since 1989/90.

Range and Pasture Conditions Improved

Range and pasture conditions for 1992 were rated at 78 percent of normal on November 1. This is a 6 percentage point improvement from the same time in 1991, and 4 points above the 1981-1990 level. A rating of 80 and above is considered good to excellent. On November 1, 1992, conditions were improved in 32 of the 48 contiguous States.

California's rating of 58 percent of normal places the State's pasture and range conditions in the middle of the very poor category. Idaho and Nevada, rated at 45 and 41 percent of normal, respectively, continue to suffer from severe drought. By the beginning of November, conditions in 33 of the 48 States were in the good to excellent category.

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Feed Use To Skyrocket in 1992/93

An increase in the number of animals on farms plus a bumper corn crop in 1992 are expected to increase feed and residual use in 1992/93, 7 percent above 1991/92.

Feed and residual use of the four feed grains—corn, sorghum, barley, and oats—totaled 142.2 million metric tons in 1991/92, up from 137.6 million in 1990/91. Use in 1992/93 is expected to increase 7 percent because of an increase in GCAU's.

The index of GCAU's in 1992/93 is expected to be up 3 percent from 1991/92 because of increases in cattle on feed, hogs, broilers, and turkeys. In 1991/92, the index was up 1 percent from a year earlier, pushed by more hogs and poultry.

Increased feed demand from the beef sector in 1992/93 is expected to come from increased numbers of cattle going to feedlots. The July 1 cattle inventory found the number of steers 500 pounds and over the same as the previous year but other heifers were down 7 percent. The number of calves under 500 pounds were the same as last year. Thus numbers available to go into feedlots appear to be about the same as a year earlier. But with early dry conditions in parts of the Southwest wheat-growing area, the wheat normally pastured has not developed enough for grazing. Thus, many cattle that would normally be on pasture likely will go into feedlots. Cattle on feed on October 1 were reported up 3 percent from last year. The number of steer and heifer calves on feed weighing under 500 pounds was up 23 percent, while the number of heavier cattle on feed rose 2 percent. Placements are expected to remain above year earlier levels for 1993.

Concentrate feed use in 1992/93 by the dairy sector is expected to be about the same to up slightly from last year. Milk cow numbers are expected to be fractionally lower than a year earlier through the end of 1993, suggesting less concentrate feed use. However, concentrates fed per cow have generally been increasing. Grain and other concentrates fed daily per

milk cow on October 1 were 17.4 pounds, up from 17.3 pounds in 1991. Alfalfa hay production, especially high quality, is down. At least partially offsetting lower alfalfa hay availability will be more silage. If the reported corn crop for grain is any indication, corn silage production should be up from last year. Unless they have silage, dairy producers may need to supplement lower quality forage to maintain milk output and use more concentrates than cow numbers would suggest.

The latest hogs and pigs survey on September 1, 1992, documented that expansion in sows farrowing and pig crops was continuing. Farrowing intentions for September 1992-February 1993 show a 3 percent increase, a declining rate from the 6 percent for the same period a year earlier. If producers carry through with these intentions, hog slaughter next spring and summer will continue above this year. Thus, feed demand by the hog sector is expected to be up from this year.

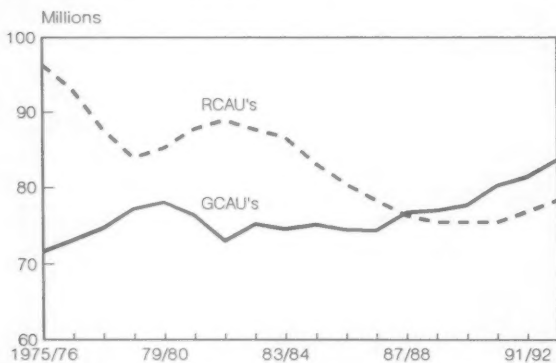
Feed use by the poultry sector will increase in 1992/93 as more birds are raised, even though layer numbers may be down slightly from 1991/92. Broiler producers continue to increase the number of eggs set and chicks hatched. In 1992/93, broiler production may increase 3 to 4 percent from 1991/92, while turkey output may be the same to up 1 percent as producers' returns have been squeezed by low turkey prices.

Egg producers in 1991/92 expanded production 2 percent from 1990/91 and prices declined. As a result, production and hen numbers in 1992/93 will likely be near this year. Thus, feed demand by the egg sector may be down slightly as pullet numbers are reduced and hen numbers remain about the same.

[Allen Baker, (202) 219-0840]

Figure 5

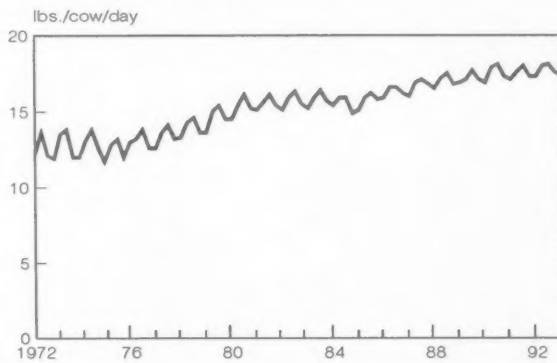
GCAU's and RCAU's



GCAU's are grain consuming animal units.
RCAU's are roughage consuming animal units.

Figure 6

Daily Feeding Rate



Amount of grains and other concentrates fed on first day of quarter.

FSI To Claim Steady Share of Corn Use in 1992/93

While complete data for 1991/92 are not yet available, total FSI use of corn appears to have grown 5 percent from the year earlier.

Corn use for FSI products has been growing over time. However, as a percentage of total use, the FSI sector has remained about the same. In 1991/92, FSI use accounted for 18 percent of the total, the same as in 1990/91. For the marketing year, FSI use likely rose 5 percent from a year earlier due to a sharp increase in fuel alcohol production and corn sweeteners. For 1992/93, corn FSI use of 1,485 million bushels is again expected to represent 18 percent of total use, and a 4 percent annual growth rate.

In 1992/93, corn sweeteners' use of corn is expected to increase nearly 3 percent from 1991/92's 602 million bushels. Use in 1991/92 was up 4 percent. The growth in corn sweeteners in recent years has been greater in glucose and dextrose than in high fructose corn syrup (HFCS). Glucose and dextrose are used to make confectionery products, light beer, drugs and pharmaceutical products. The weak economy caused slippage in some uses such as bakery products, and weather may have affected use in the brewing industry. Increases in use relative to earlier years occurred in dairy and confectionery products. HFCS is mainly used in soft drinks, which are more in demand during hot weather.

Glucose and dextrose shipments in 1991/92 were up 5 percent from a year earlier and HFCS shipments were up 3 percent. With some pickup in growth in the economy and a slight decline in corn prices in 1992/93, corn use in HFCS is expected to increase 3 percent from last year while glucose and dextrose increases 2 percent.

Shipments of starch in 1991/92 represented 237 million bushels of corn, up 2 percent from 1990/91. Over half of the starch shipments are used to manufacture paper and paper

products, with other uses as food, pharmaceutical, textiles, and building materials. Even with an increase in general economic activity, corn used for starch production is expected to rise only 1 percent from last year.

On November 1, 1992, the Clean Air Act Amendments of 1990 were in force in 39 metropolitan areas and counties that failed to meet carbon monoxide air quality standards. The gasoline sold for at least the four winter months must contain 2.7 percent oxygen by weight. The 10 percent alcohol added to the gasoline gives an oxygen percent of 3.5, well above the amount necessary to meet the requirements, and provides a Federal blending credit of 5.4 cents per gallon of gas.

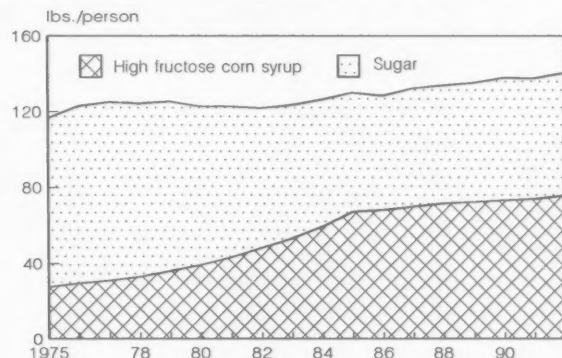
After January 1, 1993, the Federal blending credit can be prorated for 5.7 or 7.7 percent ethanol. When blended at the 7.7 percent level, the oxygen percent is 2.7. Another common oxygenate used by the gasoline industry is methyl tertiary butyl ether (MTBE). However to reach 2.7 percent oxygen, 15 percent MTBE is needed. The petroleum industry prefers MTBE because it can be blended at the refinery and handled as normal gasoline, where fuel alcohol (95 percent alcohol and 5 percent unleaded gasoline) must be kept dry and cannot be shipped by pipeline. In addition, MTBE can be made at the refinery using some byproducts from refining plus methyl alcohol. Methyl alcohol is a product derived from natural gas.

Since the beginning of the oxygenate program, MTBE prices have strengthened along with alcohol prices. Since more MTBE is needed per gallon, the blended cost of both fuels is nearly the same but alcohol may be more competitive after January. In the most recent month of blend data from the Energy Information Administration, twice as much MTBE was used in September as alcohol for blending. Also stocks of MTBE are over 7.5 times larger than stocks of alcohol. Even so, corn used to produce alcohol in 1991/92 was up 10 percent and is expected to increase 7 percent in 1992/93.

Industrial and food producers can expect prices to be down 9 to 22 percent from the estimate because of the increased corn production. Wet corn millers can offset part of the cost of corn by selling corn oil, corn gluten feed, and corn gluten meal. Vegetable oil prices tend to move together because food manufacturers can substitute other oils if one oil is in short supply and relatively high priced.

In the United States, soybean oil is most plentiful and therefore tends to determine prices. Similarly, soybean meal is the most plentiful of the protein meals. However, most of the corn gluten feed is exported to the EC and tends to carry a premium price relative to soybean meal. In 1992/93, soybean meal prices are expected to be nearly the same to down 13 percent from 1991/92 prices, but oil prices may be 10 percent higher

Figure 7
Per Capita Consumption of Sweeteners



Data is on a calendar year basis.

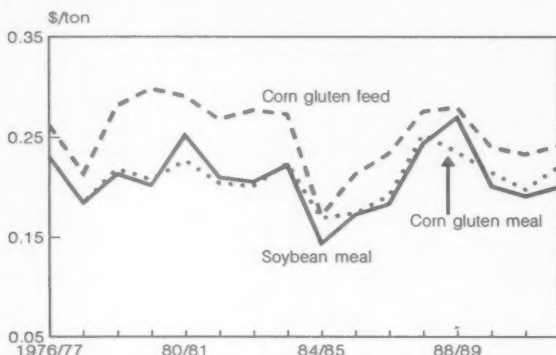
to 6 percent lower. Taking these changes into account and projecting net corn cost, wet millers can expect the net cost of corn to be down about 30-to-35 percent from 1991/92.

Dry mill alcohol producers have had higher net corn costs than wet millers because their only byproduct is distillers' dry grains and solubles. However, dry millers have a higher yield

because they can theoretically use all the starch to produce alcohol. In 1992/93, dry mill ethanol producers can expect their net corn costs to decline around 20-to-25 percent from 1991/92, because distillers' dry grain prices are likely to remain about the same as last year. Distillers' dry grain prices in 1991/92 were down from the previous year while soybean meal prices increased slightly, suggesting they may not decline as much as soybean meal prices in 1992/93.

Figure 8

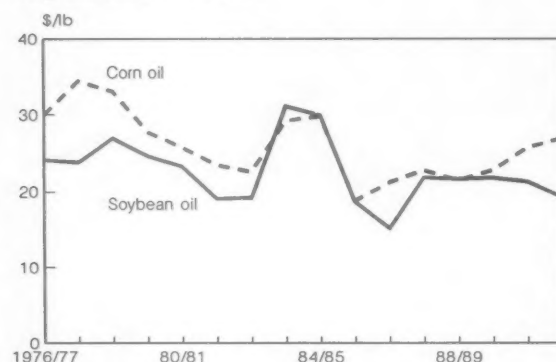
Animal Protein Feed Prices



Price per pound of protein.

Figure 9

Vegetable Oil Prices



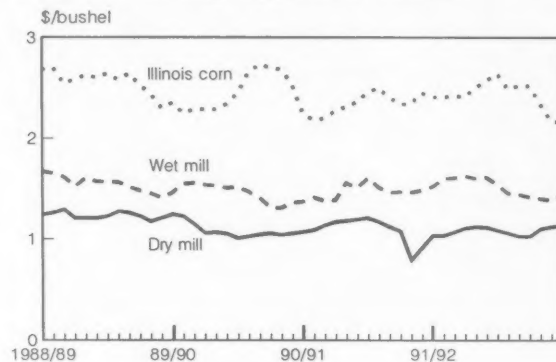
Corn used to produce beverage alcohol in 1991/92 is expected to total 81 million bushels, about the same as in 1990/91. Beverage alcohol includes both distilled liquor and beer. With a continued improvement in the economy in 1992/93, beverage alcohol is expected to use 2 percent more corn than last year. In addition, the decline in corn prices may encourage corn use rather than other grains for grain neutral-spirit production in the distilled beverage industry.

In 1991/92, corn used in the production of cereals and other products is expected to total 116 million bushels, up from 114 million in 1990/91. Population growth, especially ethnic groups that consume more corn, has pushed up the use of corn. Corn used as food in 1992/93 may increase about 1 percent from 1991/92 mainly from increased population. Wheat based ethnic foods may slow the growth of corn use.

[Allen Baker, (202) 219-0840]

Figure 10

Corn and Milling Byproduct Values



Byproduct values converted to corn equivalent based on byproduct yields.

Table 3--Corn: Food, seed, and industrial use, 1980/81-1992/93 1/

Year	HFCS	Glucose and dextrose	Starch	Fuel	Alcohol Beverage	Cereals & other products	Seed	Total
Million bushels								
1980/81	165	156	151	35	78	54	20	659
1981/82	183	160	146	86	86	53	19	733
1982/83	214	165	150	140	110	60	15	854
1983/84	265	167	170	160	88	70	19	930
1984/85	310	167	172	232	84	81	21	1,067
1985/86	327	169	190	271	83	93	19	1,152
1986/87	338	171	214	290	85	109	16	1,223
1987/88	358	173	226	279	77	113	17	1,243
1988/89	361	182	223	287	107	114	19	1,293
1989/90	368	193	230	321	109	115	19	1,355
1990/91	379	200	232	344	80	114	19	1,368
1991/92	392	210	237	378	81	116	20	1,434
1992/93	405	215	240	405	83	117	20	1,485

1/ Marketing year beginning September 1.

Rail and Barge Shipments Expected To Increase

Large crops will pressure system, but, in general, supply of transportation equipment will remain adequate. Cost pressures and good demand expected to lift rail and barge rates slightly.

Exports and domestic consumption of total grain and soybeans for 1992/93 are projected at 373.58 million metric tons, 15.5 million above 1991/92. Most of the increase stems from a projected 13.26 million metric ton rise in domestic consumption. More than half of this results from larger projected domestic corn consumption. As a result, demand for rail service is expected to be well above 1991/92 levels.

Exports of corn and soybeans are projected up 1.6 million metric tons from 1991/92. Barge shipments account for 50-60 percent of corn exports and 60-70 percent of soybean exports. Barge volume is expected to rise somewhat from 1991/92 levels.

Rail Grain Shipments Lagging 1991/92

Rail shipments of grain for September-October averaged slightly below the same months of the prior year. In October, however, average car loadings rose 19 percent, to 30,787 cars per week.

Preliminary data indicate that railed grain volume increased slightly during November. At mid-month, grain loadings averaged 31,839 cars per week, but the corn harvest continues to run well behind average.

Rail deliveries to ports during September-October lagged the same months of the previous year, averaging down 1,747 cars per week, 20 percent below 1991/92. Rail shipments to Pacific Coast ports averaged 644 cars per week below 1991/92. Reductions in the volume moving in this long-haul corridor frees a disproportionate number of cars for use in

other corridors. Preliminary indications are that rail deliveries to ports continued to lag 1991 levels during November. At mid-month, deliveries averaged 8,800 cars per week, 10 percent below November 1991.

Truck Volume To Increase

While larger domestic consumption will result in more moving by rail and barge, not all of the 13.26 million metric ton increase will be added to rail and river shipments. Much of the increased consumption will be in the form of livestock and poultry feed. Corn accounts for 68 percent of the increase. Much of this will be fed to livestock located near to the point of production and will move by truck.

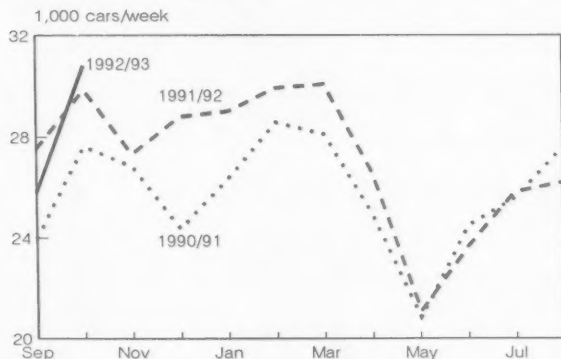
Corn production in 10 southeastern States is forecast up 34 percent, 113 million bushels from 1991/92. Although increased broiler production in these States will result in more corn being consumed, the larger local corn crops will somewhat temper demand for rail and barge service.

Rail Car Supply and Demand Up

Demand for rail service may tax the rail system, but widespread, prolonged car shortages are not anticipated. On November 1, 1992, 248,091 jumbo covered hopper cars, (4,000 cubic feet capacity or more) were in active service, up slightly from November 1991. Railroads have demonstrated the ability to load more than 32,000 cars per week. In 1987/88, with a jumbo fleet of 236,900 cars, rail car loadings averaged 31,624 cars per week over the year.

Figure 11

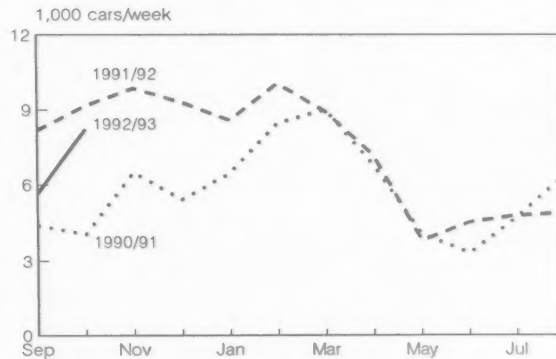
Railcar Loadings of Grain and Soybeans



Weekly data are averaged to get monthly observation.

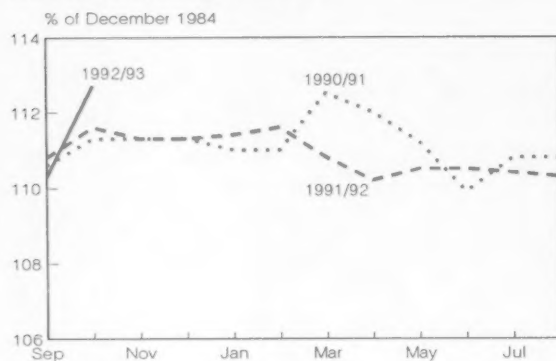
Figure 12

Railcar Unloadings of Grain



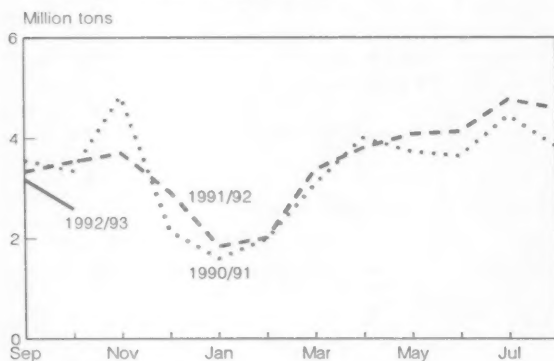
Weekly data are averaged to get monthly observation. At Atlantic, Gulf, and Pacific ports.

Figure 13

Rail Rate Index for Grain

Source: Bureau of Labor Statistics.

Figure 14

Monthly Grain Shipments

Mississippi River and Illinois waterway.

Rail Rates Up Slightly

The Bureau of Labor Statistics' rail rate index for grain in October 1992 rose 2 percent from September to 112.7 (December 1984=100). The October index stands more than a point above the same month of the prior year with a large portion of the fall harvest remaining. Rail rates are projected to rise slightly through December. The Interstate Commerce Commission projects cost of rail operations, as adjusted for productivity, to increase 2.4 percent during October-December, more than twice the projected increase for the same months of 1991. Most of the current increase results from projected rises in fuel and labor costs.

Barge Volume Down Sharply

Barge shipments of grain and soybeans on the Mississippi and Illinois Rivers in September 1992 fell, seasonally, 30 percent from August to 3.2 million tons, 3 percent below August 1991. In October, volume declined 0.6 million tons, 19 percent, from September. Relatively high barge rates in September and October appear to have resulted in reduced use of the Mississippi River system. To some extent, in October, exports shifted to Great Lakes ports. As measured by inspections for export, exports of grain and soybeans through the Great Lakes rose 125 percent, 17.5 million bushels, from September to October. The largest increase was in wheat, 12.2 million bushels, followed by soybeans, up 6.6 million bushels.

Preliminary indications are that barge volume on the Mississippi River system rose sharply in November. At mid-month, shipments of grain through Lock & Dam 27 averaged 836,000 tons per week, 28 percent above October and 3 percent above a year earlier.

Historically, barge volume on the Mississippi River system falls below 2 million tons per month in January and February as freezing weather closes the Upper Mississippi and lowers water levels on the Lower Mississippi. Because of the projected increase in corn and soybean exports, grain shipments by barge are expected to average above a year earlier during the 1992/93 crop year.

Missouri River Closing Is No Threat to Mississippi Navigation

With closing of the Missouri River to navigation in late October, water levels dropped sharply. At mid-November the gauge at Sioux City, Iowa, averaged 10.7 feet, down 26 percent from October. At Kansas City, Missouri, the gauge averaged down 13 percent to 11 feet. Still, these levels are above a year earlier when Sioux City averaged 10.5 feet and Kansas City averaged 9 feet. At this time, the reductions in flow from the Missouri into the Mississippi appear to be less of a factor than in 1991.

Mississippi Navigation Conditions Improved Over Last Year

September-October water levels at St. Louis averaged 8.0 feet at the gauge, 122 percent above the same months of the prior year and 13 percent above the 1944-88 average. At mid-November, the gauge averaged 9.7 feet, 26 percent below November 1991, and 33 percent above the 1944-88 average. There are no indications that low water conditions will hinder traffic in the foreseeable future.

Barge Rates Rise and Fall Seasonally

In September and October, barge rates for grain to New Orleans, Louisiana, from Peoria, Illinois and St. Louis, Missouri, rose seasonally from August levels. Rates from Peoria in October averaged \$11.33 per ton, up 94 percent from August. At St. Louis, October rates averaged \$10.20 per ton, 153 percent above August.

Part of these increases was caused by a buildup of empty barges between Baton Rouge, Louisiana, and New Orleans. During September-October, the number of barges in this section of the river averaged 2,666 per day, a 30 percent increase over August.

Preliminary data suggest that barge rates have declined in November. At mid-month, rates from Peoria averaged \$7.49 per ton and from St. Louis averaged \$5.53 per ton.

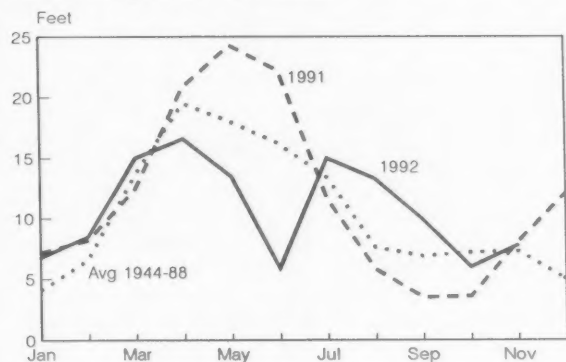
Truck Costs up Narrowly

The cost of operating large tractor trailer combinations during October 1992 was \$1.25 per mile, 1 percent above the same month of 1991. Most of this results from increases in the cost of licenses, insurance, and fuel. Diesel fuel costs in October averaged \$1.19 per gallon compared to \$1.18 per gallon for October 1991. Preliminary indications are that diesel fuel prices moved down during November. At mid-month, diesel fuel averaged \$1.18 per gallon.

[T.Q. Hutchinson, (202) 219-0840]

Figure 15

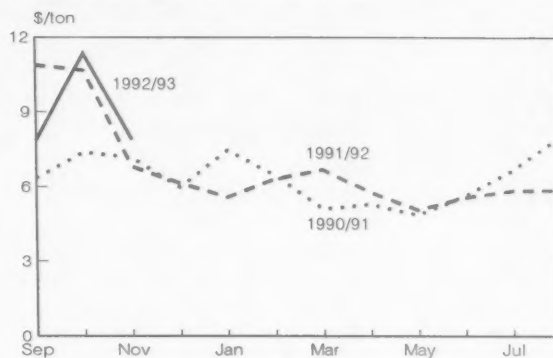
River Stages at St. Louis



Measured at flood gauge.

Figure 16

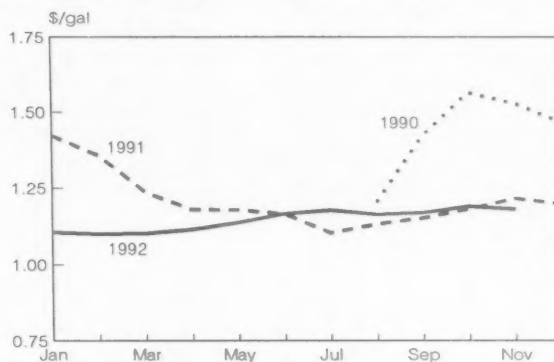
Barge Rates to New Orleans



From Peoria, IL.

Figure 17

Monthly Average Diesel Fuel Price



Source: Interstate Commerce Commission.

U.S. Gains Expected To Push Global Production and Consumption To Record in 1992/93

Production is forecast at 837 million tons, up 4.5 percent, despite lower foreign crops. Foreign consumption of coarse grains is projected up marginally in 1992/93.

Despite a decline in foreign production, the huge U.S. corn crop is forecast to propel global production of coarse grains up 4.5 percent to a record 837 million tons in 1992/93. This level of output would just surpass the previous high of 1985/86, which was also the year of the last U.S. record corn harvest. Among individual grains, world corn production is forecast up 7 percent to a record 521 million tons, sorghum up 18 percent to the highest level in 6 years at 62 million, but barley down 5 percent to 159 million, the poorest crop since 1983/84.

Weather has played a critical role in shaping the world coarse grain situation this year. Unusually cool and wet weather led to the record U.S. corn crop, but the crop has matured very slowly. Conditions were somewhat similar in Canada, delaying crops, and as they neared maturity, they were hit by an early frost. This was followed by widespread snow and rains at harvest, reducing grain quality sharply. This has led to a dramatic increase in the amount of feed-quality wheat available for domestic use in Canada and exports. Parts of Europe experienced a severe drought, bringing a sharp fall in northern European crops, particularly for barley, oats, and rye. This contributed to sharply reduced production in Eastern Europe, the European Community (EC), and Scandinavia.

After declining nearly 1 percent in 1991/92, world coarse grain supplies are forecast to rise 3.3 percent, the biggest year-to-year increase in 6 years. However, supplies were

considerably higher at their peak in the mid-1980's when U.S. stocks were much higher.

Global consumption of coarse grains is also forecast to set a record in 1992/93 at 819 million tons, up 1.6 percent from the previous year and marginally above the earlier peak in 1989/90. Again, the United States accounts for most of the gain, with foreign use projected to be flat in 1992/93. The increase in world production is forecast to outstrip gains in consumption, leading to some building of stocks. World ending stocks are forecast at 150 million tons, up about 14 percent, with gains in the United States expected to outweigh a drop in foreign stocks. This would result in a ratio of world stocks-to-use of 18.4 percent, the highest since 19.1 percent in 1988/89.

Foreign Harvests Down for Second Year

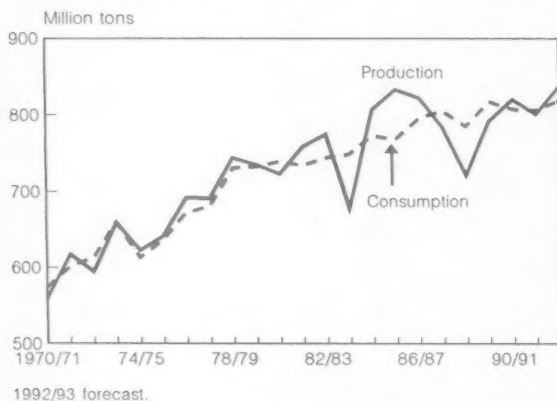
Foreign production of coarse grains is forecast at 563 million tons, down 3 percent, following an estimated 1 percent drop in 1991/92. Harvests of 1992/93 crops are nearing completion in most of the Northern Hemisphere. The production outlook for the remainder of 1992/93 is focused on the Southern Hemisphere, where planting is underway. One of the biggest questions revolves around southern Africa's recovery from drought. This is primarily weather related, but the financial problems of farmers and governments in this region might prevent as large a response as hoped if plantings and input use are restricted.

The most severe reduction among foreign producers is in Eastern Europe. For the region as a whole, production is forecast to fall 18 million tons--29 percent--to the lowest volume in nearly 30 years. Yields are expected to be the lowest since 1975. Unfavorable weather conditions account for much of the decline, but input use was reportedly down in many areas. Area is also lower, continuing to fall for reasons such as financial problems, changes in land tenure arrangements, and response to price signals, as well as poor growing conditions.

Competitor Production Down

For the major foreign exporting countries, aggregate coarse grain output will be down in 1992/93, mainly because of lower crops in the EC and China. In the EC, production is forecast to decline about 9 million tons. China's production is expected to decline by more than 5 million tons. Most of this will occur in corn because of dry conditions reported in parts of the North China Plain.

Figure 18
World Coarse Grain Production and Consumption



Among other exporters, the outlook is mixed. Canada is expected to experience a slight drop in output of total coarse grains, down about 5 percent, as reductions in barley, corn, and rye are greater than an increase in oats. Conversely, Australian production is forecast up 8 percent with gains in barley, sorghum, and oats. Thailand's output is forecast down 5 percent due to dryness that prevented some corn plantings.

South Africa is currently planting its corn and sorghum crops. Coarse grain production is forecast to rebound from 3.6 million tons in 1991/92 to 8.5 million, assuming normal weather and the end of drought. In Argentina, production is forecast to slip 10 percent, also because of assumed normal growing conditions. However, in Argentina this implies lower yields as a result of more typical conditions after exceptionally good weather in 1991/92. Economic reforms and privatization are continuing in Argentina, and auger well for the country's farm sector in future years, but immediate gains have been limited. Many farmers remain unhappy with government policies, and are reluctant to increase investment and capital expenditures.

Outlook Flat for Foreign Consumption

After 2 years of declines, 1992/93 foreign consumption of coarse grains is forecast up 1 million tons to 622 million tons. Sharp drops are expected in consumption in Eastern Europe, but these will be offset by gains elsewhere. While consumption patterns are shaped by underlying economic conditions, along with tastes and preferences, yearly variations for most countries mainly reflect crop production changes.

A pronounced reduction in coarse grain use is forecast in Eastern Europe, the EC, and Other Western Europe in 1992/93 because of much lower harvests. Use has been moving downward for many years in Western Europe, largely due to higher use of grain substitutes and wheat for feeding. In Eastern Europe, declines have been more recent because of economic reforms and the fall of the old communist regimes. Only a small drop in use is forecast for Africa, but this is contingent on a rebound from drought in southern Africa. If crops make less of a recovery than forecast, the region's consumption will probably slip further. Coarse grains are primarily consumed as food in this region, along with the rest of Sub-Saharan Africa.

Coarse grain consumption is forecast to increase slightly in the former Soviet Union (FSU) in 1992/93. The bigger-than-expected grain harvest in the FSU should help support some improvement for the mixed feed industry, as well as aiding on-farm grain feeding. There are reports that State procurements are up from previous years. However, the underlying problems remain formidable and contraction of the livestock sector will continue to take place this year.

Output of meat, milk, and eggs in the FSU is down in 1992 and herds have been shrinking. Although the private sector's livestock inventories are rising, this is more than offset by decreases in the State sector. As of September 1992, State inventories of cattle, hogs, and poultry were down 6, 13, and 23 percent from a year earlier. Feed shortages are a major concern for the FSU, hitting hog and poultry operations particularly hard. In addition, rising production costs and de-

clining demand for livestock products due to higher prices are also significant problems.

In Eastern Europe, a poor crop outturn will lead to further cut-backs in grain feeding in 1992/93, already trending down in response to economic reforms and shrinking livestock sectors. Coarse grain consumption is forecast to fall 17 percent to 49 million tons, the lowest level since 1970. With the exception of Hungary, all of the East European countries are expected to cut coarse grain use. The largest decline is forecast for Poland, which is likely to face some liquidation of hogs due to shortages of domestically grown feed and limited financial resources, making it unlikely it can import enough to cover the deficit. In addition, production of potatoes, an important feedstuff for swine in Poland, is estimated to be the lowest in more than 40 years.

Consumption Gains in Asia Expected

India will realize the biggest gains of any single foreign country or region in the world in 1992/93, with its consumption forecast to rise nearly 5 million tons. This mirrors a production recovery for India's major coarse grains, millet and sorghum, which are predominantly used as foodgrains. The shortfall in these crops that India experienced in 1991/92 had virtually no bearing on the world market, however, since India does not import coarse grains and wheat and rice were used to address these shortages.

Consumption developments in East and Southeast Asia play a more critical role in influencing world coarse grain trade. With the exception of Japan, where use has been flat in recent years, feeding of coarse grains in the region has been rising impressively in the last decade and has fueled healthy increases in demand.

South Korea is the foremost example of this growth, as strong income growth has led to large increases in livestock and poultry output, along with smaller gains in industrial processing. However, a decline is forecast in 1992/93 coarse grain

Figure 19
European Coarse Grain Consumption

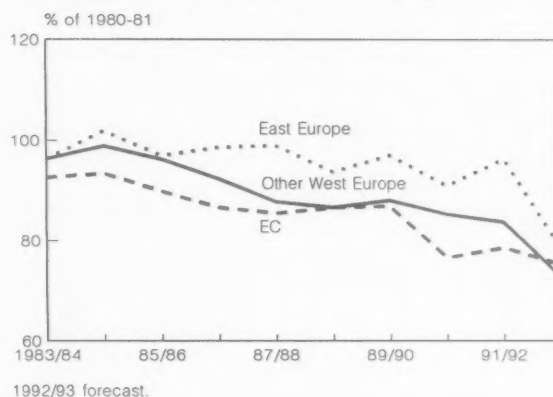
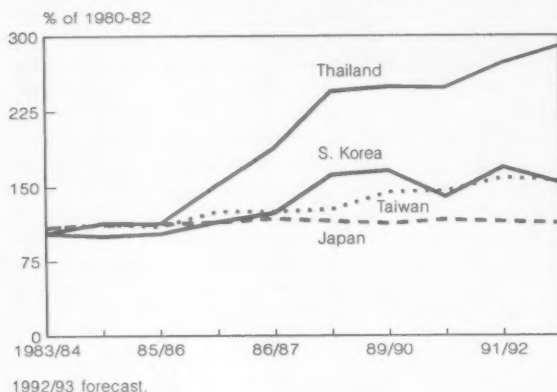


Figure 20

Asian Coarse Grain Consumption

use because of expectations of large imports of competitively priced feed quality wheat from Canada.

In Japan, coarse grain use is expected to fall about 1 percent in 1992/93. While still by far the world's largest coarse grain importer, declines in feeding in recent years have not been fully compensated by small gains in industrial use. However, this is not necessarily all negative for coarse grain trade because Japan's rising meat imports are boosting feedgrain use elsewhere, including Taiwan and Thailand.

Much of the growth in Taiwan's feeding and imports of corn stems from its pork exports to Japan, along with continued gains in domestic meat demand. In 1992/93, a slight decline is forecast in Taiwan's coarse grain use. However, no major cutbacks in hog inventories are expected yet, despite previously announced plans to control hog production for environmental reasons.

Further gains in Thailand's feeding of coarse grains are forecast in 1992/93. A booming poultry industry, largely geared for export to Japan, has brought dramatic increases in demand for corn in Thailand. Although traditionally a corn exporter, this growth has started to erode the country's ability to export corn. Thailand is likely to import corn for the second straight year in 1992/93, barely maintaining its net exporter status.

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World Trade Projected to Decline 6 Percent in 1992/93

Small gains in U.S. exports likely, along with reduced competitor shipments, boosting the U.S. market share.

Although export prices for coarse grains will be attractive to importers, trade is projected to drop to 88.7 million tons, compared with 94.3 in 1991/92.^{1/} Lower prices will invoke a response from some importers, but the overall market impact will be limited by a number of other factors. Foremost is a sharp decline expected in imports by the former Soviet Union. Another factor that will depress coarse grain trade is an expected surge in feed wheat exports by Canada, after substantial damage to its crop. This will mainly compete with corn in South Korea.

The FSU, which as recently as 3 years ago was the world's largest coarse grain buyer, has virtually abandoned the cash market and now relies on credit, barter, and other arrangements. Its imports are forecast to drop nearly 5 million tons in 1992/93 to 12.2 million tons, with corn, barley, and oats all expected down. Along with continued financial problems, this prospective fall in imports is due to an increase in domestic production of coarse grains and wheat, an increase in grain procurements by State authorities, and stagnant consumption.

South Korea's coarse grain imports are forecast at 6.3 million tons, about equal to 1991/92. However, an increase would

have been expected in the absence of feed wheat imports, forecast at about 3 million tons, that substitute for corn.

U.S. Exports To Increase

More attractive prices, combined with lower competitor supplies, are likely to boost U.S. exports and market share in 1992/93. Total U.S. coarse grain exports are forecast at 51.5 million tons, up 2 percent from the previous year but slightly below 1990/91.

Corn exports have gotten off to a very strong start, but the pace is expected to slow later in the year and shipments are forecast up just 1 percent to 41.5 million tons. U.S. sorghum exports are forecast up 3 percent to 7.6 million tons, based on expectations of large sales to Mexico, continuing the strong pace of 1991/92. Barley shipments are projected to rise 20 percent to 2.4 million tons, reflecting tighter competitor supplies and large Export Enhancement Program (EEP) offers.

Export prices for U.S. corn declined fairly steadily as crop estimates increased. The average price of U.S. corn, f.o.b. Gulf ports, for October was \$95 per ton, down 14 percent from \$110 in October 1991. As of November 19, this price had increased slightly to \$98. U.S. export sales and shipments reflects a stronger pace of sales to a variety of markets, including Taiwan, Egypt, and many Middle Eastern and Latin American countries.

^{1/} All trade years referred to in this section are October-September and exclude intra-EC trade unless otherwise specified.

The biggest share of this year-to-year increase in corn sales is to southern Africa, still reeling from the impact of drought. However, this pace will not be sustained and sales later in the year are likely to shrink, assuming a return of normal weather and a recovery of crops in that region. In 1991/92, U.S. corn exports to southern Africa—which also included donations—reached about 3.7 million tons, all coming in the second half of the year.

U.S. exports of corn to the former Soviet Union, frequently the largest U.S. market in the past, have fallen dramatically since 1989/90, and now are driven by credit guarantees and donations. Lower U.S. prices will have only a marginal impact on exports, allowing a larger quantity to be purchased for a given dollar credit allocation.

Among the component republics of the FSU, Russia is expected to continue as the main destinations of U.S. corn, mostly under credit guarantees in the GSM-102 program. Ukraine is also importing some U.S. corn under GSM-102. Smaller amounts of U.S. corn is moving as food aid donations to Russia, the Baltic states, Belarus, and Moldova. More U.S. corn donations are planned, with 1 million tons announced in late October that has not yet been allocated by former republic or State.

Corn imports by Japan, the world's largest importer, are forecast unchanged in 1992/93. Japan is the largest U.S. market and the United States will likely pick up share there, due to the absence of exports from South Africa. The prospects for sales by China, Japan's second largest supplier in 1991/92, are less certain.

Taiwan will continue as one of the top U.S. corn markets in 1992/93. Except for small purchases from Argentina, Tai-

wan's imports all came from the U.S. in 1991/92. In South Korea, U.S. corn will continue to face sharp competition from China as well as from feed wheat from Canada and possibly other exporters. South Korea has been the main market for Chinese corn in the last 2 years, based on lower prices delivered to South Korea than U.S. corn.

Corn imports by Mexico, a market dominated by the U.S., are forecast to increase modestly in 1992/93, but remain well below sorghum imports. Sorghum is the major feed grain in Mexico, and the major imported grain in the last 2 years. Corn imports still require a license, and there are restrictions on feed use. The North American Free Trade Agreement (NAFTA), if ratified by Congress, will not take effect until January 1994 and has no direct bearing on 1992/93 imports.

U.S. sorghum sales to Mexico rose nearly 2 million tons to 4.9 million in 1991/92, accounting for virtually all of the 28 percent increase in U.S. exports. Strong economic growth is boosting demand for feedgrains, while high guaranteed prices have led to a considerable shift of acreage out of sorghum into corn.

Lower Competitor Exports to Boost U.S. Market Share

The United States is expected to benefit from reduced exports by other exporters in 1992/93, boosting U.S. market share from 53 percent in 1991/92 to 58 percent. Fairly sizable declines in shipments are forecast for China, Eastern Europe, and South Africa, with lesser declines for Thailand and Argentina.

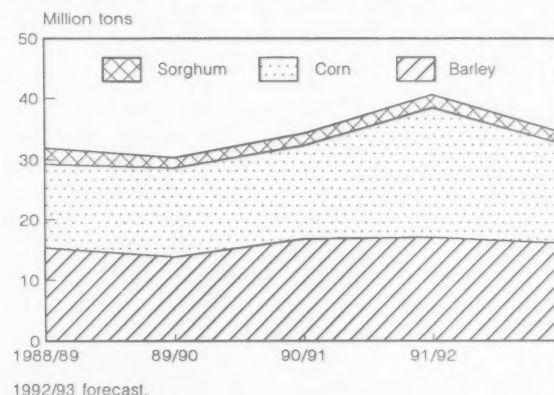
China's corn exports are forecast to decline from 9.3 million tons in 1991/92 to 7.5 million in 1992/93. Exports of new crop corn from China have been off to a slow start so far this year, possibly in response to the lower international prices and tighter domestic supplies. As usual, China's export intentions are difficult to gauge. There are signs that the movement toward a market economy has accelerated in recent months, and this could make previous behavior less meaningful as an indicator of future trends. Exports of corn at the

Table 4--U.S. Export enhancement program offers

Country	Quantity Metric tons
Barley:	
Algeria	100,000
Colombia	50,000
Cyprus	150,000
Finland	200,000
FSU-12	350,000
Israel	350,000
Jordan	150,000
Malta	35,000
Morocco	250,000
Poland	200,000
Saudi Arabia	600,000
Turkey	100,000
Total	2,535,000
Barley Malt:	
Brazil	25,000
Caribbean 1/	25,000
Central America 2/	40,000
FSU-12	25,000
Philippines	35,000
Venezuela	25,000
Total	175,000

1/ Dominican Republic, Jamaica, Trinidad and Tobago, Guyana. 2/ Belize, Costa Rica, Panama, El Salvador, Guatemala, Honduras, and Nicaragua.

Figure 21
Competitor Coarse Grain Exports



lower international prices forecast to prevail in 1992/93 will be less attractive if profit-making becomes more critical. However, China may be prepared to continue sales in order to hold market share or for foreign exchange earnings.

Argentina's corn exports are forecast to stay equal to 1991/92 at 6 million tons while its sorghum exports are expected to drop 19 percent to 1.3 million tons. If production were to exceed initial projections due to higher plantings or another year of excellent weather, then exports could rise. For South Africa, only minor exports of around 100,000 tons are foreseen, even with a recovery in production, because of the need to rebuild stocks. In addition, its new crop corn will not be available until late in the 1992/93 trade year. In 1991/92, South Africa exported an estimated 800,000 tons based on exports or commitments made before the drought hit.

World Barley Trade To Fall

World trade is forecast to decline about 3 percent to 18.4 million tons, but this would still be relatively high by historical standards. Foreign supplies of barley are generally tighter this year because of lower production, while imports by the FSU and Saudi Arabia are likely to be down. Some gains in imports by Eastern Europe, Scandinavia, and North Africa will not be sufficient to offset these declines.

Canada has tight supplies of barley, although some substitution of feed wheat for barley feed use appears likely. Exports by Canada are forecast at 2.7 million tons, the lowest since 1984/85. Exports by most smaller suppliers are also forecast to decline in 1992/93. Turkey's exports are forecast to drop 50 percent to 600,000 tons. Exports are expected from neither Finland nor Sweden, compared to 440,000 and 400,000 tons respectively in 1991/92, because of steep reductions in harvests.

Although the EC's barley harvest was also down significantly, its exports are projected to increase 8 percent to 9.5 million tons. This export increase would be attained by drawing down the record carryin stocks, enabling the EC to strengthen its share of the world market. Australia is also expected to export more, as growing conditions there have been favorable. Exports are forecast to rise about a third to 2.7 million tons.

The U.S. announced a large package of barley EEP offers in October, which will remain valid through the end of September 1993. This covers 2.54 million tons to 12 countries, with the largest allocation to Saudi Arabia.

The United States also announced a barley malt EEP package, covering a total of 175,000 tons to six countries or regions. In recent years, the U.S. has made progress in sales to non-EEP

markets, however. U.S. exports in 1991 reached nearly 117,000 tons, the highest since the late 1940's, and only about a quarter of these exports were made under EEP. Mexico, UK, and Japan were the leading destinations. In the first 9 months of 1992, total U.S. malt exports reached 97,300 tons, about equal to a year earlier.

Oats Trade Down, Rye To Rise Again

World trade in oats is expected to decline because of drought reduced harvests in Sweden and Finland, the two largest exporters in 1991/92. Exports are forecast at just 50,000 tons for each, a decrease of more than 400,000 and 300,000 tons, respectively. Canada's crop is up sharply, supporting a 67 percent increase in exports to a forecast 500,000 tons. However, the quality of the crop is not certain because of a delayed and lengthy harvest. In addition to a sharp fall in U.S. imports, forecast to fall from 1.1 million tons to 500,000 on an October-September year, tighter supplies will curtail oats imports by the FSU.

World rye trade, which is normally very small, surged in 1991/92 as the EC began to export from intervention stocks and Poland increased exports to the FSU. Most trade is usually sourced from Canada, the EC, and Scandinavia. However, rye is not a preferred feed and there are few markets where this can be sold even at low prices. World trade is typically in the range of 700,000 tons, but it jumped to around 1.5 million tons in 1991/92 and is expected to increase slightly in 1992/93.

In recent years, EC stocks have accumulated because of declines in use, relatively high production, and little international demand. Nearly all of this rye is grown in Germany and Denmark. EC exports are forecast at 1.3 million tons, about double the already high volume of 1991/92. Poor crops this year in Poland and parts of the FSU, where rye is important for feed and food, have opened up an outlet for some of the EC surplus. Poland's rye crop is estimated to be the lowest since at least 1960 (the beginning of USDA's data base), and Poland is forecast to swing from an exporter of 500,000 tons in 1991/92 to an importer.

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Table 5--U.S. Barley malt exports by leading destinations 1/

Country	1990	1991	1992 2/
1,000 metric tons			
Mexico	16.4	49.0	32.7
UK	26.8	23.1	18.7
Japan	5.5	16.0	13.5
Dominican Republic	4.4	4.3	8.9
Philippines	0.5	17.5	1.5
Venezuela	0.5	0.6	5.1
Brazil	0.0	3.8	4.7
Colombia	35.8	0.0	0.0
S. Korea	0.5	0.8	1.6
Other	7.5	1.7	0.5
Total	97.9	116.8	87.2

1/ By calendar year. 2/ January-August only.

Table 6--World coarse grain trade: Major exporters and importers by commodity, 1988/89-1992/93 1/

Item	1988/89	1989/90	1990/91	1991/92 2/	1992/93 3/
Million metric tons					
CORN					
Exporters:					
U.S.	51.3	60.0	44.5	41.0	41.5
Argentina	2.5	3.0	3.7	6.0	6.0
China	3.7	3.2	6.6	9.3	7.5
Thailand	1.4	1.3	1.2	0.6	0.5
South Africa	2.0	2.9	0.8	0.8	0.1
Others	4.4	4.4	3.4	4.8	2.5
Total	65.3	74.8	60.0	62.5	58.1
Importers:					
Japan	15.9	16.0	16.3	16.2	16.2
Former USSR	19.5	19.4	11.5	10.4	7.4
EC-12	2.9	4.1	3.7	2.0	2.0
Korea, Rep.	5.7	6.1	5.6	6.2	6.2
Taiwan	4.2	5.3	5.3	5.7	5.4
Mexico	3.2	5.0	1.8	1.1	1.8
China	0.0	0.5	0.0	0.0	0.0
East Europe	1.7	2.3	1.8	0.3	0.7
Brazil	0.2	0.4	0.9	0.4	0.0
Egypt	1.2	1.4	2.1	1.2	0.5
Others	10.8	14.5	11.0	19.0	17.9
Total	65.3	74.8	60.0	62.5	58.1
SORGHUM					
Exporters:					
U.S.	8.1	7.3	5.8	7.4	7.6
Argentina	0.7	1.2	1.3	1.6	1.3
Australia	0.3	0.0	0.2	0.1	0.2
Others	1.7	0.5	0.5	0.4	0.4
Total	10.8	9.0	7.8	9.5	9.5
Importers:					
Japan	4.1	3.9	3.6	3.5	3.3
Mexico	2.3	3.0	3.0	4.7	5.5
Taiwan	0.1	0.0	0.1	0.1	0.1
Venezuela	1.0	0.1	0.0	0.0	0.0
Israel	0.4	0.4	0.2	0.2	0.0
Former USSR	1.2	0.3	0.0	0.0	0.0
Others	1.7	1.3	1.0	1.0	0.6
Total	10.8	9.0	7.8	9.5	9.5
BARLEY					
Exporters:					
EC-12	9.0	6.7	7.5	8.8	9.5
Canada	3.4	3.7	4.5	3.2	2.7
Australia	1.4	2.4	2.7	2.0	2.7
U.S.	1.7	1.9	1.5	2.0	2.4
Others	1.6	1.0	2.1	3.0	1.2
Total	17.1	15.7	18.3	19.0	18.4
Importers:					
Saudi Arabia	4.6	3.3	4.5	6.0	5.3
Former USSR	3.5	4.9	4.9	5.5	3.9
East Europe	0.9	0.4	1.5	0.3	1.4
Japan	1.3	1.3	1.5	1.5	1.5
Others	6.8	5.9	6.0	5.7	6.4
Total	17.1	15.7	18.3	19.0	18.4
COARSE GRAINS					
TOTAL TRADE	96.1	102.1	87.9	94.3	88.7

1/ October-September year, excludes intra-EC trade.
Totals might not add because of rounding. 2/ Preliminary.
3/ Forecast.

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Appendix table 1--Feed grains: Marketing year supply and disappearance, area, and prices, 1985/86-1992/93 1/

Year 2/	Supply			Disappearance					Ending stocks				
	Begin- ning stocks	Produc- tion	Imports	Total	Domestic use			Exports	Total disap- pearance	Govt. owned	Privately owned 3/	Total	
					Food, alcohol, and industrial	Seed	Feed and residual						
Million metric tons													
1985/86	57.5	274.3	0.8	332.6	33.5	1.5	135.1	170.0	36.1	206.2	20.4	106.0	126.4
1986/87	126.4	251.6	0.7	378.7	35.0	1.4	144.3	180.7	45.9	226.6	48.7	103.4	152.1
1987/88	152.1	216.5	1.0	369.6	35.9	1.3	146.7	183.9	52.1	236.0	34.1	99.5	133.6
1988/89	133.6	149.3	1.2	284.2	37.5	1.2	118.5	157.2	61.1	218.3	18.6	47.3	65.9
1989/90	65.9	221.0	1.3	288.2	39.2	1.1	132.7	173.0	69.7	242.7	10.5	35.0	45.5
1990/91	45.5	230.5	1.3	277.3	39.4	1.1	137.6	178.1	51.5	229.6	11.3	36.4	47.7
1991/92 4/	47.7	218.2	2.1	268.0	41.1	1.1	142.2	184.4	49.7	234.0	3.2	30.8	34.0
1992/93 5/	34.0	273.5	1.3	308.7	-----	43.6-----	152.4	195.9	50.7	246.6			62.1

	Set-aside and diverted 6/ -	Area		Harvested for grain	Yield per harvested hectare	Average price received by farmers 7/ -	Government- support program Total payments to participants \$ million
		Planted	-				
1985/86	2.9	51.8	45.2	6.07	111	8/ 2,874	
1986/87	8.0	48.4	41.1	6.12	73	9/ 7,280	
1987/88	12.5	43.2	35.2	6.16	97	9/ 8,447	
1988/89	11.1	41.2	32.6	4.59	129	9/ 4,207	
1989/90	6.8	42.9	36.8	6.00	118	8/ 4,091	
1990/91	6.9	41.8	36.2	6.36	112	8/ 3,399	
1991/92	5.1	42.3	37.2	5.87	119	8/ 2,458	
1992/93	4.0	43.9	38.9	7.02			

1/ Aggregated data on corn, sorghum, barley, and oats. 2/ The marketing year for corn and sorghum begins September 1; for oats and barley, June 1. 3/ Includes total Government loans (original and resale). 4/ Preliminary. 5/ Projected. 6/ Includes diversion, acreage reduction, 0-92, and 50-92 programs; 0-92, and 50-92 set-aside include idled acreage and acreage planted to minor oilseeds. 7/ Excludes support payments. 8/ Deficiency payments. 9/ Deficiency and diversion payments.

Appendix table 2--Foreign coarse grains: Supply and disappearance, 1980/81-1992/93 1/

Year	Beginning stocks	Production	Feed	Total disappearance	Imports	Adjusted imports 2/	Ending stocks
Million metric tons							
Corn:							
1980/81	46.7	239.9	169.9	297.7	79.2	78.1	50.2
1981/82	50.2	235.2	177.9	291.5	77.9	67.3	44.7
1982/83	44.7	230.7	175.8	281.6	73.0	63.3	40.0
1983/84	40.0	241.7	168.9	288.7	64.6	61.1	40.8
1984/85	40.8	264.3	185.3	303.5	72.6	66.5	48.5
1985/86	48.5	253.9	187.6	291.0	61.8	54.2	42.4
1986/87	42.4	266.2	195.4	307.5	60.8	56.6	38.9
1987/88	38.9	269.2	200.4	312.4	63.6	56.6	39.2
1988/89	39.2	275.4	215.7	326.2	74.6	65.3	39.7
1989/90	39.7	271.1	221.6	334.1	82.4	74.8	36.8
1990/91	36.8	276.7	196.6	314.6	63.6	60.0	41.9
1991/92 3/	41.9	295.2	212.0	325.2	74.0	62.0	51.7
1992/93 4/	51.7	283.6	209.0	330.1	61.8	57.9	45.6
Sorghum:							
1980/81	7.0	44.6	23.1	50.8	12.8	14.1	8.2
1981/82	8.2	48.2	28.3	55.5	14.3	13.7	7.5
1982/83	7.5	43.9	25.0	50.5	12.3	11.6	6.2
1983/84	6.2	46.2	25.6	52.0	13.0	13.0	6.6
1984/85	6.6	43.8	25.8	51.9	12.8	13.1	6.1
1985/86	6.1	41.7	24.6	47.3	9.6	8.8	5.0
1986/87	5.0	40.5	23.0	46.3	8.1	7.8	4.3
1987/88	4.3	37.7	22.1	44.6	8.8	8.3	3.3
1988/89	3.3	39.9	23.7	46.4	11.0	10.8	4.7
1989/90	4.7	39.4	21.6	47.0	9.3	9.0	4.8
1990/91	4.8	37.9	20.9	44.6	7.9	7.8	4.0
1991/92 3/	4.0	37.7	21.1	44.6	9.5	9.5	4.6
1992/93 4/	4.6	39.7	22.0	47.7	9.6	9.5	4.2
Barley:							
1980/81	15.7	149.3	107.6	150.7	16.2	13.8	16.2
1981/82	16.2	139.2	105.4	143.8	20.3	13.9	13.6
1982/83	13.6	150.0	108.4	147.1	17.2	13.1	17.2
1983/84	17.2	147.2	115.8	154.2	20.2	16.4	12.0
1984/85	12.0	157.4	115.9	152.4	22.9	17.9	18.4
1985/86	18.4	159.9	120.4	156.3	22.1	18.2	22.3
1986/87	22.3	163.4	125.5	162.2	24.0	18.4	26.3
1987/88	26.3	162.5	128.0	166.4	20.5	15.7	24.7
1988/89	24.7	156.4	117.2	156.2	20.5	16.9	26.4
1989/90	26.4	155.9	121.0	159.7	20.5	15.5	24.1
1990/91	24.1	168.4	125.6	165.9	22.6	18.0	28.1
1991/92 3/	28.1	157.4	116.7	159.6	21.4	18.5	27.5
1992/93 4/	27.5	149.1	115.8	155.0	22.8	18.1	23.5
Total coarse grains: 5/							
1980/81	77.3	524.8	343.6	591.1	110.3	108.1	82.1
1981/82	82.1	512.2	353.7	580.5	114.7	97.5	73.1
1982/83	73.1	524.6	359.0	576.3	103.8	89.7	73.6
1983/84	73.6	540.4	366.0	598.3	99.3	92.9	71.2
1984/85	71.2	569.2	379.0	609.0	110.9	99.6	86.8
1985/86	86.8	558.4	388.8	598.1	95.2	82.3	82.4
1986/87	82.4	570.2	396.4	614.7	94.7	82.8	83.0
1987/88	83.0	566.9	403.2	620.7	94.9	82.9	80.3
1988/89	80.3	571.4	405.5	627.8	107.8	94.6	83.8
1989/90	83.8	571.1	417.0	643.9	114.3	100.8	79.4
1990/91	79.4	589.1	397.9	629.0	95.9	86.2	89.8
1991/92 3/	89.8	582.3	391.9	621.4	106.8	92.1	98.2
1992/93 4/	98.2	563.0	383.4	622.4	96.9	87.6	88.2

1/ Aggregated on basis of local marketing years, except for adjusted imports. 2/ Based on Oct./Sept. trade year and excludes intra-EC trade. 3/ Forecast. 4/ Projected. 5/ Includes oats, rye, millet, and mixed grains.

Source: Compiled from World Grain Situation and Outlook, Foreign Agricultural Service, and USDA data.

Appendix table 3--Corn: Marketing year supply and disappearance, area, and prices 1985/86-1992/93

Year beginning September 1	Supply			Disappearance				Ending stocks Aug. 31					
	Begin- ning stocks	Produc- tion	Imports	Total	Food, alcohol, and industrial	Domestic use—		Exports	Total disap- pearance	Govt. owned	Privately owned 1/	Total	
						Seed	Feed and residual						
													Total
Million bushels													
1985/86	1,648.2	8,875.5	9.9	10,533.6	1,133.0	19.5	4,114.2	5,266.7	1,227.3	6,494.1	545.7	3,493.8	4,039.5
1986/87	4,039.5	8,225.8	1.8	12,267.0	1,206.8	16.7	4,669.4	5,892.9	1,492.5	7,385.3	1,443.2	3,438.5	4,881.7
1987/88	4,881.7	7,131.3	3.4	12,016.4	1,226.0	17.2	4,797.7	6,040.9	1,716.4	7,757.3	835.0	3,424.1	4,259.1
1988/89	4,259.1	4,928.7	2.8	9,190.6	1,275.0	18.4	3,941.0	5,234.4	2,025.8	7,260.1	362.5	1,567.9	1,930.4
1989/90	1,930.4	7,525.5	1.9	9,457.8	1,337.0	18.9	4,389.2	5,745.1	2,368.2	8,113.4	233.0	1,111.5	1,344.5
1990/91	1,344.5	7,934.0	3.4	9,281.9	1,347.9	19.3	4,668.8	6,036.0	1,724.6	7,760.7	371.1	1,150.1	1,521.2
1991/92 2/	1,521.2	7,474.5	19.6	9,015.4	1,413.6	20.2	4,897.2	6,331.0	1,583.9	7,914.9	112.5	988.0	1,100.5
1992/93 3/	1,100.5	9,328.9	10.0	10,439.3	-----	1,485.0	5,200.0	6,685.0	1,600.0	8,285.0			2,154.3

	Set-aside and diverted 4/	Area		Yield harvested per acre	Received by farmers 5/	Average prices			Government-support program			
		Planted	Harvested for grain			St. Louis No. 2 yellow	Omaha No. 2 yellow	Gulf Ports No. 2 yellow	National average loan rate	Target price	Total payments to participants	
		-Million acres-		Bushels								\$ million
1985/86	5.4	83.4	75.2	118.0	2.23	2.37	2.25	2.52	2.55	3.03		6/ 2,479
1986/87	14.3	76.6	68.9	119.4	1.50	1.68	1.53	1.83	1.92	3.03		7/ 6,327
1987/88	23.1	66.2	59.5	119.8	1.94	2.19	1.98	2.39	1.82	3.03		7/ 7,378
1988/89	20.5	67.7	58.3	84.6	2.54	2.72	2.49	2.93	1.77	2.93		8/ 3,625
1989/90	10.8	72.2	64.7	116.3	2.36	2.58	2.41	2.79	1.65	2.84		9/ 3,589
1990/91	10.7	74.2	67.0	118.5	2.28	2.49	2.28	2.67	1.57	2.75		6/ 3,015
1991/92	7.5	76.0	68.8	108.6	2.37	2.53	2.36	2.74	1.63	2.75		6/ 2,080
1992/93	5.3	79.3	72.1	129.3	1.85-2.15				1.72	2.75		

1/ Includes quantity under loan and farmer-owned reserve. 2/ Preliminary. 3/ Projected. 4/ Includes diversion, acreage reduction, 0-92, and 50-92 programs; 0-92, and 50-92 set-aside include idled acreage and acreage planted to minor oilseeds. 5/ Excludes support payments. 6/ Deficiency payments. 7/ Deficiency and diversion payments. 8/ Deficiency, diversion, and disaster payments. 9/ Deficiency and disaster payments.

Appendix table 4--Sorghum: Marketing year supply and disappearance, area, and prices, 1985/86-1992/93

Year beginning September 1	Supply			Disappearance				Ending stocks Aug. 31					
	Begin- ning stocks	Produc- tion	Imports	Total	Food, alcohol, and industrial	Domestic use--		Exports	Total disap- pearance	Govt. owned	Privately owned 1/	Total	
						Seed	Feed and residual						
Million bushels													
1985/86	300.3	1,120.3	0.0	1,420.6	26.0	1.7	663.9	691.6	178.0	869.6	207.2	343.8	551.0
1986/87	551.0	938.9	0.0	1,489.9	10.4	1.6	536.2	548.2	198.3	746.5	408.9	334.4	743.3
1987/88	743.3	730.8	0.0	1,474.1	23.5	1.3	555.1	579.9	231.6	811.5	463.6	199.1	662.7
1988/89	662.7	576.7	0.0	1,239.3	20.5	1.5	466.4	488.4	311.5	799.8	340.9	98.6	439.5
1989/90	439.5	615.4	0.2	1,055.2	13.6	1.3	517.3	532.2	303.2	835.4	162.5	57.3	219.8
1990/91	219.8	573.3	0.1	793.1	7.3	1.4	409.8	418.5	232.0	650.5	64.7	77.9	142.6
1991/92 2/	142.6	579.5	0.0	722.1	7.5	1.7	368.2	377.4	291.4	668.9	8.2	45.0	53.2
1992/93 3/	53.2	877.5	0.0	930.7	----	10.0----	500.0	510.0	300.0	810.0			120.7
Set-aside and diverted 4/	Area		Yield per acre	Average prices				Government-support program					
	Planted	Harvested for grain		Received by farmers 5/	Kansas No. 2 yellow	Texas No. 2 yellow	Gulf Ports No. 2 yellow	National average loan rate	Target price	Total payments to participants			
			-Million acres-								-\$/cwt.-		-\$ million
1985/86	0.9	18.3	16.8	66.8	3.45	3.72	4.32	4.07	4.32	5.14	6/ 228		
1986/87	2.9	15.3	13.9	67.7	2.45	2.73	3.24	3.22	3.25	5.14	7/ 570		
1987/88	4.1	11.8	10.5	69.4	3.04	3.40	3.81	3.96	3.11	5.14	7/ 708		
1988/89	3.9	10.3	9.0	63.8	4.05	4.17	4.66	4.81	3.00	4.96	8/ 352		
1989/90	3.3	12.6	11.1	55.4	3.75	4.21	4.38	4.76	2.80	4.82	9/ 421		
1990/91	3.3	10.5	9.1	63.1	3.79	4.08	4.48	4.65	2.66	4.66	6/ 317		
1991/92	2.4	11.0	9.8	59.0	4.02	4.36	4.78	4.93	2.75	4.66	6/ 175		
1992/93	1.9	13.5	12.3	71.2	3.12-3.66				2.91	4.66			

1/ Includes quantity under loan and farmer-owned reserve. 2/ Preliminary. 3/ Projected. 4/ Includes diversion, acreage reduction, 0-92, and 50-92 programs. 5/ 0-92 and 50-92 set-aside include idled acreage and acreage planted to minor oilseeds. 6/ Excludes support payments. 7/ Deficiency and diversion payments. 8/ Deficiency, diversion, and disaster payments. 9/ Deficiency and disaster payments.

Appendix table 5--Barley: Marketing year supply and disappearance, area, and prices, 1985/86-1992/93

Year beginning June 1	Supply			Disappearance				Ending stocks May 31					
	Begin- ning stocks	Produc- tion	Imports	Total	Domestic use			Exports	Total dis- appear- ance	Govt. owned	Privately owned 1/	Total	
					Food, alcohol, and industrial	Seed	Feed and residual						
Million bushels													
1985/86	247.4	590.2	6.2	843.9	156.5	21.3	319.1	496.9	19.7	516.7	57.4	269.8	327.2
1986/87	327.2	608.5	6.7	942.4	156.9	17.9	297.7	472.5	133.6	606.1	75.5	260.8	336.3
1987/88	336.3	521.5	11.3	869.1	158.1	15.7	253.2	427.0	121.0	548.0	50.1	271.0	321.1
1988/89	321.1	290.0	10.5	621.6	160.4	15.0	170.9	346.3	78.9	425.2	30.4	166.0	196.4
1989/90	196.4	404.2	13.1	613.7	162.0	13.5	193.3	368.8	84.0	452.9	19.3	141.5	160.8
1990/91	160.8	422.2	13.5	596.5	161.1	14.6	204.8	380.5	80.6	461.1	8.4	127.0	135.4
1991/92 2/	135.4	464.3	24.5	624.2	158.0	12.8	230.3	401.1	94.5	495.6	6.5	122.1	128.6
1992/93 3/	128.6	456.3	20.0	604.9	---	170.0---	195.0	365.0	110.0	475.0			129.9

Set-aside and diverted 4/	Area		Yield per acre harvested	Average prices--			Government-support program		
	Planted	Harvested for grain		No. 2 or better feed 6/	No. 3 or better mating	Portland No. 2	National average loan rate	Target price	Total payments to participants \$ million
--\$/bu.--									
0.7	13.1	11.6	50.9	1.98	1.53	2.24	2.23	2.60	7/ 159
2.0	13.0	12.0	50.8	1.61	1.44	1.89	1.96	2.60	8/ 351
2.9	11.0	10.0	52.4	1.81	1.78	2.04	2.09	2.60	8/ 335
2.8	9.8	7.6	38.0	2.80	2.32	4.11	2.74	2.51	9/ 181
2.3	9.1	8.3	48.6	2.42	2.20	3.28	2.61	2.43	10/ 78
2.9	8.2	7.5	56.1	2.14	2.13	2.42	2.65	2.36	7/ 59
2.2	8.9	8.4	55.2	2.10	2.17	2.38	2.66	2.36	7/ 173
2.1	7.8	7.3	62.4	2.00-2.20				2.36	

1/ Includes quantity under loan and farmer-owned reserve. 2/ Preliminary. 3/ Projected. 4/ Includes diversion, acreage reduction, 0-92, and 50-92 programs; 0-92, and 50-92 set-aside include idled acreage and acreage planted to minor oilseeds. 5/ Excludes support payments. 6/ Starting March 1987, shifted to Duluth. 7/ Deficiency payments. 8/ Deficiency and diversion payments. 9/ Deficiency, diversion, and disaster payments. 10/ Deficiency and disaster payments.

Appendix table 6--Oats: Marketing year supply and disappearance, area, and prices, 1985/86-1992/93

Year beginning June 1	Supply				Disappearance				Ending stocks May 31				
	Begin- ning stocks	Produc- tion	Imports	Total	Food, alcohol, and industrial	Domestic use		Exports	Total disap- pearance	Govt. owned	Privately owned 1/	Total	
						Seed	Feed and residual						
													Million bushels
1985/86	179.9	518.5	27.2	725.6	44.0	32.5	464.2	540.7	1.2	541.9	1.9	181.8	183.7
1986/87	183.7	385.0	32.4	601.0	45.0	38.0	384.4	467.4	0.9	468.3	3.5	129.2	132.7
1987/88	132.7	373.7	45.7	552.1	49.8	31.6	358.2	439.6	0.5	440.1	3.5	108.5	112.0
1988/89	112.0	217.6	62.9	392.5	72.7	27.1	193.8	293.6	0.6	294.2	2.4	95.9	98.3
1989/90	98.3	373.6	66.4	538.3	91.6	23.4	265.6	380.6	0.8	381.4	0.7	156.2	156.9
1990/91	156.9	357.5	63.4	577.8	100.9	19.1	286.0	406.0	0.6	406.6	0.3	170.9	171.2
1991/92 2/	171.2	243.5	74.8	489.4	106.9	18.1	234.8	359.8	1.9	361.7	0.2	127.5	127.7
1992/93 3/	127.7	294.6	40.0	462.3	130.0	230.0	360.0	362.0	2.0				100.3
	Set-aside and diverted 4/	Area		Yield per acre harvested	Received by farmers 5/	Average prices		Government-support program					
		Planted	Harvested for grain			Minneapolis No. 2 white, heavy	Portland No. 2 white, heavy	Toledo No. 2	National average loan rate	Target price	Total payments to participants		
												Total \$ million	
1985/86	0.1	13.2	8.1	63.6	1.23	1.31	1.60		1.08	1.31	1.60	6/ 8	
1986/87	0.5	14.7	6.8	56.3	1.21	1.46	1.53		1.20	0.99	1.60	7/ 32	
1987/88	0.8	17.9	6.9	54.3	1.56	1.92	1.76		1.68	0.94	1.60	7/ 26	
1988/89	0.3	13.9	5.5	39.3	2.61	2.80	2.23		2.26	0.90	1.55	8/ 49	
1989/90	0.4	12.1	6.9	54.3	1.49	1.65	1.63		1.40	0.85	1.50	9/ 3	
1990/91	0.2	10.4	5.9	60.1	1.14	1.30	1.58		1.17	0.81	1.45	6/ 8	
1991/92	0.6	8.7	4.8	50.7	1.20	1.47	1.60		1.37	0.83	1.45	6/ 30	
1992/93	0.5	8.0	4.5	65.6	1.25-1.35					0.87	1.45		

NA = Not available.

1/ Includes quantity under loan and farmer-owned reserve. 2/ Preliminary. 3/ Projected. 4/ Includes diversion, acreage reduction, 0-92, and 50-92 programs. 5/ Set-aside include total acreage and acreage planted to minor oilseeds. 6/ Excludes support payments. 7/ Deficiency and diversion payments. 8/ Deficiency, diversion, and disaster payments. 9/ Disaster payments.

Appendix Table 8--Sorghum: Marketing year supply and disappearance, 1985/86-1992/93

Year beginning September 1	Supply			Disappearance			Ending stocks				
	Begin- ning stocks	Produc- tion	Imports	Total	Food, alcohol and industrial	Domestic use ¹ Seed and residual	Exports	Total disap- pearance	Govt. owned	Privately owned 1/	Total
Million bushels											
1985/86:											
Sept.-Nov.	300.3	1,120.3	0.0	1,420.6	7.6	230.4	70.2	308.3	138.6	973.7	1,112.3
Dec.-Feb.	1,112.3	---	0.0	1,112.3	7.9	232.8	43.1	283.9	175.2	653.3	828.5
Mar.-May	630.0	---	0.0	630.0	6.6	163.7	26.9	198.4	181.4	448.6	630.0
June-Aug.	---	---	0.0	---	3.9	36.9	37.7	79.0	207.2	343.8	551.0
Mkt. year	300.3	1,120.3	0.0	1,420.6	26.0	663.9	178.0	869.6	207.2	343.8	551.0
1986/87:											
Sept.-Nov.	551.0	938.9	0.0	1,489.9	2.8	180.4	47.5	230.7	292.1	967.1	1,259.2
Dec.-Feb.	1,259.2	---	0.0	1,259.2	2.9	182.3	56.2	241.4	364.9	652.8	1,017.7
Mar.-May	1,017.7	---	0.0	1,017.7	2.4	128.2	51.2	182.8	400.4	434.6	835.0
June-Aug.	835.0	---	0.0	835.0	2.2	45.3	43.5	91.6	408.9	334.4	743.3
Mkt. year	551.0	938.9	0.0	1,489.9	10.4	536.2	198.3	746.5	408.9	334.4	743.3
1987/88:											
Sept.-Nov.	743.3	730.8	0.0	1,474.1	4.9	171.3	45.5	221.7	465.3	787.1	1,252.4
Dec.-Feb.	1,252.4	---	0.0	1,252.4	5.1	173.1	63.1	241.3	545.5	465.6	1,011.1
Mar.-May	1,011.1	---	0.0	1,011.1	4.2	121.2	77.1	203.3	511.4	296.4	807.8
June-Aug.	807.8	---	0.0	807.8	9.3	89.6	45.8	145.2	463.6	199.1	662.7
Mkt. year	743.3	730.8	0.0	1,474.1	23.5	555.1	231.6	811.5	463.6	199.1	662.7
1988/89:											
Sept.-Nov.	662.7	576.7	0.0	1,239.3	5.9	171.3	64.5	241.6	432.9	564.8	997.7
Dec.-Feb.	997.7	---	0.0	997.7	6.1	173.1	93.5	272.6	396.4	328.7	725.1
Mar.-May	725.1	---	0.0	725.1	5.0	79.7	80.6	166.1	363.8	195.2	559.0
June-Aug.	559.0	---	0.0	559.0	3.5	42.3	73.0	119.5	340.9	98.6	439.5
Mkt. year	662.7	576.7	0.0	1,239.3	20.5	466.4	311.5	799.8	340.9	98.6	439.5
1989/90:											
Sept.-Nov.	439.5	615.4	0.0	1,054.9	3.6	185.8	89.9	279.3	314.6	461.0	775.6
Dec.-Feb.	775.6	---	0.0	775.6	4.4	176.5	81.2	262.0	223.0	290.6	513.6
Mar.-May	513.6	---	0.1	513.7	2.5	94.2	81.3	178.7	190.2	144.8	335.0
June-Aug.	335.0	---	0.1	335.1	3.1	60.9	50.8	115.3	162.5	57.3	219.8
Mkt. year	439.5	615.4	0.2	1,055.2	13.6	517.3	303.2	835.4	162.5	57.3	219.8
1990/91:											
Sept.-Nov.	219.8	573.3	0.0	793.1	1.8	222.3	56.6	280.7	157.7	354.6	512.3
Dec.-Feb.	512.3	---	0.0	512.3	1.9	116.3	61.2	179.5	149.6	183.3	332.9
Mar.-May	332.9	---	0.1	332.9	1.8	32.4	76.0	110.9	108.4	113.6	222.0
June-Aug.	222.0	---	0.0	222.0	1.8	38.7	38.2	79.4	64.7	77.9	142.6
Mkt. year	219.8	573.3	0.1	793.1	7.3	409.8	232.0	650.5	64.7	77.9	142.6
1991/92:											
Sept.-Nov.	142.6	579.5	0.0	722.1	1.9	223.5	46.2	271.6	34.3	416.2	450.5
Dec.-Feb.	450.5	---	0.0	450.5	2.0	89.0	108.2	199.2	19.6	231.6	251.2
Mar.-May	251.2	---	0.0	251.2	1.9	32.9	105.0	140.9	14.3	96.1	110.4
June-Aug.	110.4	---	0.0	110.4	1.7	22.9	32.0	57.2	8.2	45.0	53.2
Mkt. year 2/	142.6	579.5	0.0	722.1	7.5	368.2	291.4	668.9	8.2	45.0	53.2
1992/93:											
Mkt. year 3/	53.2	877.5	0.0	930.7	-----10.0-----	500.0	300.0	810.0			120.7

--- = Not applicable.

1/ Includes quantity under loan and farmer-owned reserve. 2/ Preliminary. 3/ Projected.

Appendix table 9--Barley: Marketing year supply and disappearance, specified periods, 1985/86-1992/93

Year beginning June 1	Supply			Disappearance			Ending stocks				
	Begin- ning stocks	Produc- tion	Imports	Total	Food, alcohol, and industrial	-Domestic use- seed and residual	Exports	Total disap- pearance	Govt. owned	Privately owned 1/	Total
Million bushels											
1985/86:											
June-Aug.	247.4	590.2	0.7	838.3	41.6	0.0	10.4	140.0	20.0	678.3	698.3
Sept.-Nov.	698.3	---	1.3	699.6	35.8	1.5	7.3	127.5	36.1	536.0	572.1
Dec.-Feb.	572.1	---	2.5	574.6	35.8	1.7	1.3	109.9	47.3	417.4	464.7
Mar.-May	468.7	---	1.7	466.4	43.5	18.1	0.8	139.2	57.4	269.8	327.2
Mkt. year	247.4	590.2	6.2	843.9	156.5	21.3	19.7	516.7	57.4	269.8	327.2
1986/87:											
June-Aug.	327.2	608.5	1.3	937.1	42.4	0.0	13.5	150.3	56.0	730.8	786.8
Sept.-Nov.	786.8	---	1.0	787.8	36.7	1.3	43.5	135.2	56.2	568.1	634.3
Dec.-Feb.	634.3	---	1.2	635.5	36.0	1.4	31.8	136.2	73.2	424.1	499.3
Mar.-May	499.3	---	3.1	502.4	41.8	15.2	44.8	166.1	75.5	260.8	336.3
Mkt. year	327.2	608.5	6.7	942.4	156.9	17.9	133.6	606.1	75.5	260.8	336.3
1987/88:											
June-Aug.	336.3	521.5	1.1	858.9	42.7	0.0	16.8	133.9	74.9	650.1	725.0
Sept.-Nov.	725.0	---	2.9	727.9	37.1	1.1	42.5	145.5	79.5	502.9	582.4
Dec.-Feb.	582.4	---	4.3	586.7	36.3	1.3	28.6	128.2	57.0	401.5	458.5
Mar.-May	458.5	---	3.0	461.5	42.0	13.3	28.6	140.4	50.1	271.0	321.1
Mkt. year	336.3	521.5	11.3	869.1	158.1	15.7	121.0	548.0	50.1	271.0	321.1
1988/89:											
June-Aug.	321.1	290.0	2.8	613.9	44.0	0.0	25.8	163.5	35.9	414.5	450.4
Sept.-Nov.	450.4	---	2.2	452.6	38.4	1.1	12.9	80.5	35.9	336.2	372.1
Dec.-Feb.	372.1	---	2.8	374.9	37.2	1.2	15.3	94.3	34.1	246.5	280.6
Mar.-May	280.6	---	2.7	283.3	41.8	12.7	25.2	86.9	30.4	166.0	196.4
Mkt. year	321.1	290.0	10.5	621.6	160.4	15.0	78.9	425.2	30.4	166.0	196.4
1989/90:											
June-Aug.	196.4	404.2	3.6	604.2	45.7	0.0	26.5	186.2	36.6	381.3	417.9
Sept.-Nov.	417.9	---	2.0	419.9	39.3	0.9	17.2	69.3	36.3	314.3	350.6
Dec.-Feb.	350.6	---	3.3	353.9	37.2	1.1	22.7	101.2	32.1	220.6	252.7
Mar.-May	252.7	---	4.2	256.9	39.8	11.5	17.6	96.1	19.3	141.5	160.8
Mkt. year	196.4	404.2	13.1	613.7	162.0	13.5	84.0	452.9	19.3	141.5	160.8
1990/91:											
June-Aug.	160.8	422.2	1.0	584.0	44.7	0.0	30.9	173.2	14.3	396.6	410.9
Sept.-Nov.	410.9	---	1.3	412.1	39.0	1.0	25.2	106.4	12.1	293.6	305.7
Dec.-Feb.	305.7	---	4.2	309.9	37.6	1.2	18.6	99.0	9.6	201.3	210.9
Mar.-May	210.9	---	7.0	217.9	39.8	12.4	6.0	82.5	8.4	127.0	135.4
Mkt. year	160.8	422.2	13.5	596.5	161.1	14.6	80.6	461.1	8.4	127.0	135.4
1991/92:											
June-Aug.	135.4	464.3	7.4	607.1	44.7	0.0	13.5	167.2	7.7	432.3	440.0
Sept.-Nov.	440.0	---	3.5	443.4	37.8	0.9	36.7	115.0	7.0	321.4	328.4
Dec.-Feb.	328.4	---	6.5	334.8	36.5	1.0	24.6	119.0	6.8	209.1	215.9
Mar.-May 2/	215.9	---	7.2	223.1	39.0	10.9	19.7	94.5	6.5	122.1	128.6
Mkt. year 2/	135.4	464.3	24.5	624.2	158.0	12.8	94.5	495.6	6.5	122.1	128.6
1992/93:											
Mkt. year 3/	128.6	456.3	20.0	604.9	---	---	110.0	365.0	---	125.9	129.9

--- = Not applicable.

1/ Includes quantity under loan and farmer-owned reserve. 2/ Preliminary. 3/ Projected.

Appendix table 10--Oats: Marketing year supply and disappearance, 1985/86-1992/93

Year beginning June 1	Supply			Disappearance			Ending stocks			
	Produc- tion	Imports	Total	Food, alcohol, and industrial	Domestic use: Seed and residual	Exports	Total disap- pearance	Govt. owned	Privately owned	Total
Million bushels										
1985/86:										
June-Aug.	518.5	4.4	702.8	12.8	0.0	135.8	148.7	0.1	148.8	552.6
Sept.-Nov.	---	4.2	558.3	11.2	3.9	118.1	133.2	0.3	133.5	422.9
Dec.-Feb.	---	8.9	433.7	10.9	1.0	109.3	121.2	0.1	121.2	310.4
Mar.-May	---	9.7	322.1	9.0	27.6	101.0	137.7	0.8	136.4	181.8
Mkt. year	179.9	27.2	725.6	44.0	32.5	464.2	540.7	1.2	541.9	181.8
1986/87:										
June-Aug.	385.0	8.7	577.4	13.1	0.0	112.5	125.6	0.2	125.9	449.1
Sept.-Nov.	---	2.8	456.3	11.5	4.6	97.8	113.9	0.3	114.2	339.0
Dec.-Feb.	---	9.2	351.4	10.1	1.1	90.5	102.8	0.1	102.9	244.9
Mar.-May	---	9.6	258.1	9.3	32.3	83.7	125.2	0.3	125.5	129.2
Mkt. year	183.7	32.4	601.0	45.0	38.0	384.4	467.4	0.9	468.3	129.2
1987/88:										
June-Aug.	373.7	7.0	513.4	14.5	0.0	104.8	119.3	0.2	119.5	390.5
Sept.-Nov.	---	8.1	401.9	12.7	3.8	91.1	107.6	0.1	107.8	290.7
Dec.-Feb.	---	15.8	309.9	12.3	0.9	84.3	97.6	0.1	97.7	208.8
Mar.-May	---	14.8	227.0	10.2	26.9	77.9	115.0	0.1	115.1	108.5
Mkt. year	373.7	45.7	552.1	49.8	31.6	358.2	439.6	0.5	440.1	108.5
1988/89:										
June-Aug.	217.6	12.3	341.8	21.2	0.0	56.7	77.9	0.2	78.1	260.7
Sept.-Nov.	---	11.9	275.6	18.6	3.3	49.3	71.1	0.1	71.3	204.4
Dec.-Feb.	---	20.1	224.5	18.0	0.8	42.2	64.4	0.2	64.6	157.2
Mar.-May	---	18.6	178.5	15.0	23.0	45.2	80.1	0.1	80.2	95.9
Mkt. year	217.6	62.9	392.5	72.7	27.1	193.8	293.6	0.6	294.2	95.9
1989/90:										
June-Aug.	373.6	17.0	488.9	26.6	0.0	88.7	115.3	0.2	115.6	372.0
Sept.-Nov.	---	17.5	390.8	23.3	2.7	77.1	103.2	0.3	103.4	286.2
Dec.-Feb.	---	15.7	303.1	22.6	0.7	64.9	88.2	0.2	88.3	213.6
Mar.-May	---	16.3	231.0	19.1	20.0	34.8	73.9	0.2	74.1	156.2
Mkt. year	373.6	66.4	538.3	91.6	23.4	265.6	380.6	0.8	381.4	156.2
1990/91:										
June-Aug.	357.5	17.5	532.0	28.7	0.0	151.4	180.1	0.2	180.2	351.1
Sept.-Nov.	---	11.7	363.4	24.7	2.2	42.1	69.1	0.2	69.3	293.5
Dec.-Feb.	---	18.2	312.3	24.6	0.5	57.9	83.0	0.1	83.1	228.8
Mar.-May	---	16.0	245.2	22.9	16.4	34.6	73.9	0.1	74.0	170.9
Mkt. year	357.5	63.4	577.8	100.9	19.1	286.0	406.0	0.6	406.6	170.9
1991/92:										
June-Aug.	243.5	21.7	436.4	30.5	0.0	121.7	152.2	0.1	152.3	283.8
Sept.-Nov.	---	17.3	301.4	26.5	2.1	28.0	56.6	0.2	56.8	244.3
Dec.-Feb.	---	17.6	262.3	26.0	0.5	40.7	87.2	0.2	87.4	174.9
Mar.-May 1/	---	18.1	193.0	23.9	15.5	24.5	63.9	1.4	65.3	127.5
Mkt. year 1/	243.5	74.8	489.4	106.9	18.1	234.8	359.8	1.9	361.7	127.5
1992/93:										
Mkt. year 2/	294.6	40.0	462.4	-----	130.0-----	230.0	360.0	2.0	362.0	100.3

--- = Not applicable.
1/ Preliminary. 2/ Projected.

Appendix table 14--Price trends, selected feeds, and corn products

Item	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.-Aug. Average 1/
-----\$/ton-----													
Wholesale, mostly bulk 2/:													
Soybean meal, 44% solvent, Decatur:	191.90 192/93	183.00 168.60	178.00	170.70	172.70	174.30	174.20	174.80	182.75	181.70	173.90	174.40	177.70
Soybean meal, high protein, Decatur:	204.25 192/93	196.30 180.60	190.25	183.10	184.00	185.40	185.90	187.20	195.25	203.90	186.25	186.00	190.65
Cottonseed meal, 41% solvent, Memphis:	133.10 192/93	131.00 154.40	144.40	162.00	156.25	143.10	124.25	121.25	127.50	132.50	133.75	146.90	138.00
Linseed meal, 34% solvent, Minneapolis:	116.25 192/93	128.00 141.25	133.75	127.80	122.00	124.00	115.00	117.50	120.00	125.00	123.50	126.25	123.25
Meat and bone meal, Kansas City 3/:	232.50 192/93	227.00 216.60	219.40	208.50	208.90	205.90	215.70	202.25	206.50	206.20	197.10	204.40	211.20
Fishmeal, 67% protein, East Coast:	385.00 192/93	403.50 412.50	406.90	321.50	394.40	390.60	NQ	348.00	364.20	365.80	345.00	300.70	335.47
Corn gluten feed, Illinois pts.:	95.60 192/93	104.60 108.50	106.10	107.00	107.40	108.50	101.50	95.50	95.40	94.40	99.40	102.50	101.49
Corn gluten meal, 60% protein, IL. pts.:	269.40 192/93	292.50 269.40	296.25	287.50	267.50	275.60	272.00	247.50	246.25	248.50	243.75	242.75	265.79
Brewers' dried grains, grains, Milwaukee:	99.00 192/93	107.50 110.25	113.10	121.00	121.90	122.50	108.50	87.75	90.00	90.00	94.40	99.40	104.59
Dist. dried grains, Lawrenceburg, IN.:	118.00 192/93	118.00 110.25	122.00	126.60	128.00	127.60	124.10	121.00	117.25	117.20	126.00	NQ	122.34
Feather meal, Arkansas pts.:	202.50 192/93	198.80 240.00	205.00	227.50	221.40	209.75	226.00	198.10	191.25	195.20	192.50	201.75	205.81
Wheat bran, Kansas City:	61.60 192/93	72.90 79.60	84.40	81.80	76.90	78.40	77.40	60.10	59.10	62.10	60.25	56.50	69.29
Wheat middlings, Kansas City:	61.60 192/93	72.90 79.60	84.40	81.80	76.90	78.40	77.40	60.10	59.10	62.10	60.25	56.50	69.29
Rice bran, f.o.b. mills, Arkansas:	49.90 192/93	46.60 45.10	59.90	75.50	77.50	60.50	52.70	52.60	50.10	51.90	56.75	49.20	56.93
Hominy feed, Illinois pts.:	80.00 192/93	77.20 72.50	83.60	86.20	88.00	93.60	91.70	92.75	84.50	83.90	83.25	77.90	85.22
Alfalfa meal, dehyd. Kansas City:	103.00 192/93	103.00 99.50	103.00	104.00	104.00	104.00	102.60	101.75	98.75	98.00	97.75	97.00	101.40
Cane molasses, New Orleans:	65.25 192/93	65.00 55.30	65.00	67.00	65.00	65.00	65.00	65.00	63.75	62.50	62.50	62.50	64.46
Molasses beet pulp, Los Angeles 4/:	80.00 192/93	80.00 102.80	104.25	107.50	113.10	115.00	121.40	123.00	110.00	112.60	114.00	114.00	107.90
Animal fat, Kansas City 5/:	10.50 192/93	10.20 NQ	9.60	9.60	10.00	10.00	10.00	10.30	10.20	NQ	NQ	NQ	10.04
Urea, 42% nitrogen, Fort Worth:	180.00 192/93	180.00	180.00	180.00	180.00	180.00	180.00	180.00	180.00	190.00	190.00	190.00	182.50
Corn, no. 2 white, Kansas City:	2.80 192/93	2.80 2.61	2.75	2.64	2.66	2.73	3.30	3.54	3.55	3.60	3.54	2.79	3.06

See footnotes at end of table.

Continued--

Appendix table 17--Hay (all): Acreage, supply, and disappearance, 1985/86-1992/93

Item	Unit	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93
Acreage harvested	Mil. acres	60.5	62.3	60.1	65.1	63.3	61.4	62.6	60.4
Yield per acre	Tons	2.46	2.49	2.45	1.94	2.30	2.39	2.45	2.47
Carryover (May 1)	Mil. tons	26.8	26.7	32.3	27.1	17.5	27.1	27.0	28.6
Production	"	148.7	155.4	147.5	126.0	145.5	146.8	153.5	148.9
Supply	"	175.5	182.1	179.8	153.1	163.0	173.9	180.5	177.6
Disappearance	"	148.8	149.9	152.7	135.6	135.9	146.9	152.0	NA
Roughage-consuming animal units (RCAU's)	Mil. units	80.5	78.3	76.3	75.5	75.5	75.5	76.8	78.3
Supply per RCAU	Tons	2.18	2.33	2.36	2.03	2.16	2.30	2.35	2.27
Disappearance per RCAU	"	1.85	1.91	2.00	1.80	1.80	1.94	1.98	NA

NA = Not available.

Appendix table 18--Hay: Average prices received by farmers, United States, by months, 1983/84-1992/93 1/

Year	May	June	July	Aug.	Sept.	Oct. 2/	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	Average 3/
\$/ton													
Alfalfa:													
1983/84	83.80	78.30	77.40	77.40	79.10	82.40	80.10	81.70	82.00	85.10	84.40	84.30	81.33
1984/85	87.10	80.10	75.60	72.80	73.90	76.70	74.30	77.50	76.20	76.40	75.80	76.70	76.93
1985/86	85.50	74.90	72.50	68.10	70.70	70.50	67.70	69.10	70.20	71.30	72.00	69.80	71.86
1986/87	69.50	64.10	61.40	60.10	58.80	59.90	57.90	60.70	58.80	61.10	62.80	67.90	61.92
1987/88	76.30	66.90	65.10	66.30	67.60	67.70	63.70	67.40	66.50	69.60	72.50	76.90	69.31
1988/89	84.50	81.90	87.90	86.10	87.30	90.30	92.20	94.40	96.70	99.40	105.00	107.00	93.83
1989/90	105.00	96.50	89.90	87.50	91.20	89.80	91.30	92.50	93.30	95.20	96.70	103.00	93.80
1990/91	104.00	92.60	89.40	86.30	89.20	90.70	85.70	84.60	84.20	84.80	85.90	92.10	86.60
1991/92	88.50	79.40	74.50	74.60	72.00	71.80	72.80	72.90	74.20	76.10	73.70	74.70	75.30
1992/93	80.20	80.00	78.20	73.30	73.10	75.00							
Other hay:													
1983/84	58.90	56.10	54.30	52.90	57.80	59.50	62.10	64.30	63.30	63.80	64.90	66.50	60.37
1984/85	64.90	63.40	61.80	60.90	62.40	62.00	62.60	64.80	64.80	64.70	61.70	58.40	62.70
1985/86	58.70	54.00	57.00	58.40	58.60	58.20	55.30	56.00	56.10	56.00	54.80	54.90	56.50
1986/87	54.00	50.90	50.00	51.00	52.70	50.00	49.70	49.40	48.10	50.90	48.30	48.20	50.27
1987/88	51.90	50.80	49.60	51.00	51.80	51.10	52.30	51.10	52.20	51.50	51.70	51.90	52.09
1988/89	59.30	62.00	65.10	68.10	68.90	69.00	70.00	69.50	70.00	72.10	73.60	76.70	70.03
1989/90	78.80	69.00	63.60	63.10	66.10	62.80	63.00	63.00	64.00	62.50	63.70	65.10	65.50
1990/91	66.10	62.90	60.40	62.90	63.20	63.50	63.60	62.40	61.30	60.20	61.60	60.20	65.10
1991/92	60.60	57.40	55.30	59.90	56.60	58.40	59.40	57.30	55.70	57.80	58.60	64.30	61.80
1992/93	56.10	61.00	55.20	56.60	55.50	57.00							
All hay:													
1983/84	78.10	72.70	71.20	71.20	74.70	76.80	75.10	76.70	76.60	78.70	79.40	79.80	75.80
1984/85	82.50	76.10	72.40	70.40	70.70	73.10	71.40	73.40	73.00	73.10	72.20	72.50	72.70
1985/86	80.80	70.20	67.90	65.20	67.10	67.50	64.30	65.40	65.80	66.70	67.10	66.20	67.60
1986/87	66.70	61.00	58.80	58.20	57.60	57.90	56.00	57.70	56.10	58.50	59.20	64.10	59.70
1987/88	71.70	62.90	61.20	62.70	64.10	64.20	61.10	63.20	62.80	64.60	67.20	71.40	65.00
1988/89	79.70	77.00	81.60	81.40	82.90	85.10	86.40	87.60	89.50	91.80	96.90	101.00	85.20
1989/90	100.00	90.20	83.40	81.60	85.70	83.20	83.20	83.50	84.90	85.70	87.50	95.00	85.40
1990/91	96.00	85.00	81.60	81.00	83.20	84.00	80.40	78.70	77.90	77.80	80.50	87.30	80.60
1991/92	83.70	74.50	70.20	71.50	68.10	68.90	69.10	68.40	69.00	70.60	70.10	73.00	71.00
1992/93	74.20	75.50	71.80	69.60	68.50	70.50							

1/ Revised prices reported for mid-month. 2/ October 1992 data are preliminary. 3/ U.S. season average prices weighted by monthly marketings.

Source: Agricultural Prices, Agricultural Statistics Board, USDA.

Appendix table 19--Shipments of grain on the Illinois Waterway and the Mississippi River (Locks 11-22), 1981/82-1992/93

Crop Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
	Million tons												
1981/82	3.4	3.4	4.6	3.9	1.2	0.8	2.1	4.1	3.8	4.4	3.9	5.0	3.4
1982/83	4.1	3.2	4.2	3.2	2.7	2.3	3.8	3.3	3.9	4.2	4.2	4.8	3.6
1983/84	5.3	4.9	5.7	4.4	1.0	3.6	4.5	5.3	4.4	3.7	3.4	3.3	4.1
1984/85	3.1	4.6	5.5	3.1	2.0	0.9	3.1	4.1	3.1	3.2	3.4	3.0	3.3
1985/86	2.4	2.6	4.3	3.3	1.8	1.7	2.9	3.4	3.6	3.2	2.5	3.3	2.9
1986/87	3.2	3.1	5.2	2.4	1.2	1.7	3.6	3.8	4.0	3.8	2.8	3.5	3.2
1987/88	3.3	3.8	3.9	2.9	1.9	2.0	3.0	4.2	4.3	3.6	2.7	3.3	3.2
1988/89	3.3	3.3	3.9	3.5	1.7	1.5	2.6	3.5	4.3	4.1	3.9	3.4	3.3
1989/90	3.0	3.9	4.7	2.5	2.2	2.2	3.5	4.5	5.2	4.5	5.0	4.0	3.8
1990/91	3.6	3.4	4.8	2.1	1.6	2.0	3.1	4.0	3.7	3.6	4.4	3.8	3.4
1991/92	3.3	3.5	3.7	2.9	1.8	2.0	3.4	3.8	4.1	4.1	4.8	4.6	3.5
1992/93	3.2	2.6											

Source: Mississippi River Barge Traffic, U.S. Army Corps of Engineers, Rock Island District.

Appendix table 20--Barge rates for grain shipments to New Orleans, Louisiana 1/

Crop Year	Origin	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
		Dollars/ton												
1984/85	Peoria, IL	7.77	8.07	6.71	5.79	7.34	6.87	5.73	5.08	4.33	4.76	4.83	4.63	5.99
	St Louis, MO	5.94	5.92	5.15	3.98	4.36	4.20	3.88	3.79	3.29	3.39	3.34	3.64	4.24
1985/86	Peoria, IL	5.26	7.93	6.48	9.08	7.22	5.64	4.28	4.13	3.90	3.70	3.70	6.21	5.63
	St Louis, MO	4.32	6.42	4.80	5.35	4.39	3.97	3.18	3.14	2.97	2.99	2.96	4.62	4.08
1986/87	Peoria, IL	8.37	10.54	6.64	5.16	4.95	5.23	6.96	5.88	5.44	6.16	6.15	6.46	6.50
	St Louis, MO	6.52	7.52	5.06	3.62	3.28	3.52	5.27	4.54	3.77	4.30	4.37	4.99	4.73
1987/88	Peoria, IL	8.66	9.04	7.38	5.68	7.32	6.89	8.16	7.25	6.19	9.86	9.79	7.61	7.82
	St Louis, MO	6.58	6.97	5.73	4.29	4.39	4.59	6.13	5.47	4.65	7.56	6.81	6.46	5.80
1988/89	Peoria, IL	9.80	10.32	7.88	8.81	7.32	7.26	7.08	5.85	5.34	6.13	4.92	5.13	7.15
	St Louis, MO	7.91	8.35	5.94	6.11	5.19	5.31	5.40	4.18	3.72	4.44	3.68	3.92	5.35
1989/90	Peoria, IL	5.89	10.49	10.87	12.15	9.13	7.32	6.43	7.70	6.43	5.47	4.56	5.40	7.65
	St Louis, MO	4.64	7.90	6.84	7.05	5.23	5.07	4.92	5.64	4.82	3.99	3.22	3.96	5.27
1990/91	Peoria, IL	6.33	7.38	7.16	5.97	7.46	6.45	5.09	5.28	4.85	5.62	6.65	7.98	6.35
	St Louis, MO	4.76	5.57	5.62	4.21	4.89	4.20	3.91	3.88	3.44	4.11	4.90	6.24	4.65
1991/92	Peoria, IL	10.87	10.67	6.86	6.13	5.57	6.31	6.67	5.76	5.05	5.55	5.83	6.26	6.79
	St Louis, MO	8.22	8.43	5.09	4.39	3.72	4.52	5.07	4.23	3.52	4.06	4.05	4.19	4.96
1992/93	Peoria, IL	7.85	11.33	8.66										9.28
	St Louis, MO	6.50	10.20	8.58										7.76

1/ Assumes all traffic on the Illinois River originates at Peoria.

Source: Based on rates reported by Transportation Situation, Illinois Dept. of Agriculture.

Appendix table 21--Weekly average of rail car loadings of grain and soybeans, 1980/81-1992/93

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
Carloads													
1980/81	32,127	24,114	31,450	28,106	34,396	31,108	27,657	23,490	21,291	28,014	22,162	26,152	27,506
1981/82	25,607	25,609	27,419	22,384	22,967	27,220	26,813	25,798	23,755	22,540	27,020	25,123	25,188
1982/83	20,321	29,523	25,350	21,888	24,700	26,318	26,807	21,243	20,849	21,393	27,942	27,461	24,483
1983/84	29,735	31,414	29,515	25,927	31,068	29,105	27,666	26,784	23,616	24,335	26,632	29,848	27,970
1984/85	29,162	24,482	28,587	25,441	25,310	23,688	23,340	20,164	17,715	24,724	22,662	20,218	23,791
1985/86	18,889	26,227	28,214	23,482	25,424	22,558	20,648	17,743	17,673	24,907	22,426	24,342	22,878
1986/87	27,329	33,605	29,877	24,827	23,086	26,663	27,134	25,046	26,189	32,154	32,257	30,825	28,249
1987/88	32,977	32,820	29,947	29,225	32,223	34,224	34,241	32,963	30,861	33,316	29,678	27,010	31,624
1988/89	29,014	30,628	27,140	27,120	30,324	30,583	31,436	30,181	25,943	27,253	25,095	25,990	28,392
1989/90	24,437	28,950	31,701	29,411	32,250	32,605	29,648	27,938	25,696	26,122	25,717	26,904	28,375
1990/91	23,982	27,622	26,822	24,359	26,337	28,560	28,100	24,927	20,833	24,500	25,581	27,573	25,766
1991/92	27,537	29,833	27,346	28,778	28,994	29,915	30,059	26,586	21,096	23,888	25,821	26,200	27,154
1992/93	25,797	30,787											28,292

Source: Association of American Railroads.

Appendix table 22--Rail freight rate index for grain, crop years 1980/81-1992/93

Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Average
December 1984=100													
1980/81	78.3	78.8	78.8	79.2	83.1	84.1	85.0	84.8	84.8	85.7	88.0	88.5	83.3
1981/82	88.5	89.4	89.4	89.4	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.1
1982/83	93.0	93.0	93.0	93.0	93.9	93.9	93.9	93.9	93.9	93.9	93.9	93.9	93.6
1983/84	93.9	94.2	94.2	94.2	98.0	98.0	98.0	98.0	98.0	98.0	98.4	98.4	96.8
1984/85	98.4	100.0	100.0	100.0	100.0	100.0	99.3	99.3	98.7	97.3	96.4	96.3	98.8
1985/86	98.0	98.0	98.0	98.0	98.9	99.0	99.0	99.1	99.2	99.2	99.2	99.2	98.7
1986/87	99.2	98.5	98.5	97.8	98.3	98.3	98.8	98.6	98.5	98.6	98.6	98.5	98.5
1987/88	98.9	99.1	99.1	99.1	101.2	101.2	101.4	102.7	104.1	104.3	106.4	109.3	102.2
1988/89	109.3	108.3	108.5	108.2	109.2	109.2	108.8	108.8	108.8	108.0	108.4	108.4	108.7
1989/90	108.4	108.6	108.7	108.7	109.1	109.1	109.1	109.7	109.7	109.2	109.7	110.5	109.1
1990/91	110.6	111.3	111.3	111.3	111.0	111.0	112.5	112.0	111.2	109.9	110.8	110.8	111.1
1991/92	110.8	111.6	111.6	111.6	111.4	111.6	110.8	110.2	110.5	110.4	110.4	110.3	110.9
1992/93	110.3	112.7											111.5

Source: Bureau of Labor Statistics, U.S. Department of Labor.

Appendix table 23--Processed feeds: Quantity fed, 1984-92 1/ 2/

	1984	1985	1986	1987	1988	1989	1990	1991	1992 3/
----- 1,000 metric tons -----									
High protein:									
Oilseed meal--									
Soybean 4/	17,672	17,318	18,495	19,317	17,833	20,197	20,785	20,137	21,800
Cottonseed	1,595	1,379	1,026	1,442	1,481	1,239	1,470	1,580	1,542
Linseed	109	100	115	127	93	126	112	115	123
Peanut	112	159	103	109	147	112	99	158	145
Sunflower	307	313	269	381	293	271	306	461	471
Canola	139	120	204	219	322	342	384	657	658
Total	19,934	19,389	20,212	21,595	20,169	22,287	23,156	23,108	24,739
Animal proteins--									
Tankage and meat meal	2,523	2,540	2,395	2,457	2,328	2,320	2,292	2,305	2,350
Fishmeal and solubles	589	564	571	553	265	354	466	275	300
Milk products	386	374	398	411	405	418	398	409	415
Total	3,498	3,377	3,265	3,221	2,998	3,062	2,936	2,989	3,065
Grain protein feeds--									
Gluten feed and meal	1,876	1,055	1,165	1,484	1,289	218	164	795	820
Brewers' dried grains	142	135	146	120	107	108	108	108	108
Distillers' dried grains	807	873	805	1,035	947	1,452	1,492	1,750	1,800
Total	2,825	2,063	2,116	2,639	2,343	1,778	1,764	2,653	2,728
Other:									
Wheat millfeeds	5,084	5,278	5,714	5,652	5,717	5,617	5,987	6,093	6,400
Rice millfeeds	456	503	610	551	615	554	555	530	573
Dried and molasses beetpulp	728	701	645	699	661	758	1,051	767	995
Alfalfa meal	808	777	589	554	365	300	333	270	300
Fats and oils	665	765	832	826	944	972	998	878	900
Molasses, inedible	2,407	1,887	1,771	1,598	1,593	1,988	2,168	1,723	1,840
Miscellaneous byproduct feeds 5/	709	791	895	1,976	1,107	1,202	1,248	1,297	1,327
Total	10,857	10,702	11,056	10,856	11,002	11,391	12,340	11,558	12,335
Grand total	37,114	35,531	36,649	38,311	36,512	38,518	40,196	40,308	42,867

NA = Not available.

1/ Year beginning October. 2/ Adjusted for stocks, productions, foreign trade, and nonfeed uses where applicable. 3/ Forecast.

4/ Includes use in edible soy products and shipments to U.S. territories. 5/ Allowance for hominy feed, oat millfeeds, and screenings.

Appendix table 24--Feed concentrates, number of animal units, and feed per unit, 1984-92 1/

	1984	1985	1986	1987	1988	1989	1990	1991	1992
	Million metric tons								
Concentrates:									
Corn	104.5	104.5	118.6	121.9	100.1	111.5	118.6	124.4	132.1
Sorghum	13.7	16.0	13.6	14.1	11.8	13.1	10.6	8.4	12.7
Oats	6.5	9.4	3.5	4.5	3.3	4.8	2.7	3.3	5.1
Barley	6.3	7.1	6.0	5.9	4.2	3.9	2.7	2.1	2.8
Wheat and rye	10.2	11.2	11.6	6.0	3.9	8.0	12.9	2.0	5.8
Oilseed meals	19.8	19.3	20.0	21.4	19.8	21.9	22.8	23.5	24.1
Animal protein feeds	3.5	3.4	3.3	3.2	3.0	3.1	2.9	3.0	3.1
Grain protein feeds	12.8	12.1	12.1	10.9	10.9	11.7	11.7	11.6	12.8
Other byproduct feeds	10.9	10.7	11.1	10.9	10.9	11.3	12.3	11.6	12.4
Total	178.2	181.5	191.8	190.5	159.3	179.3	190.0	185.0	199.9
Grain-consuming animal units (GCAU's):									
	Million units								
Dairy cattle	12.1	12.5	11.7	11.5	11.4	11.4	11.4	11.1	11.1
Cattle on feed	19.1	18.0	17.3	18.2	17.5	17.8	19.3	18.3	19.2
Other cattle	4.5	4.3	4.2	4.0	4.0	4.0	3.9	4.1	4.2
Hogs	19.8	19.3	19.4	20.8	21.3	20.7	21.0	22.3	23.3
Poultry	19.0	19.8	21.1	21.5	22.0	23.1	23.9	24.9	25.3
Other livestock	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Total	75.2	74.5	74.4	76.7	77.0	77.7	80.3	81.4	83.7
Concentrates GCAU									
	Tons per unit								
Four feed grains	1.74	1.81	1.93	1.91	1.55	1.71	1.71	1.75	1.81
All concentrates	2.37	2.44	2.58	2.48	2.07	2.31	2.37	2.27	2.39
1/ Marketing years, 1991/92 forecast.									



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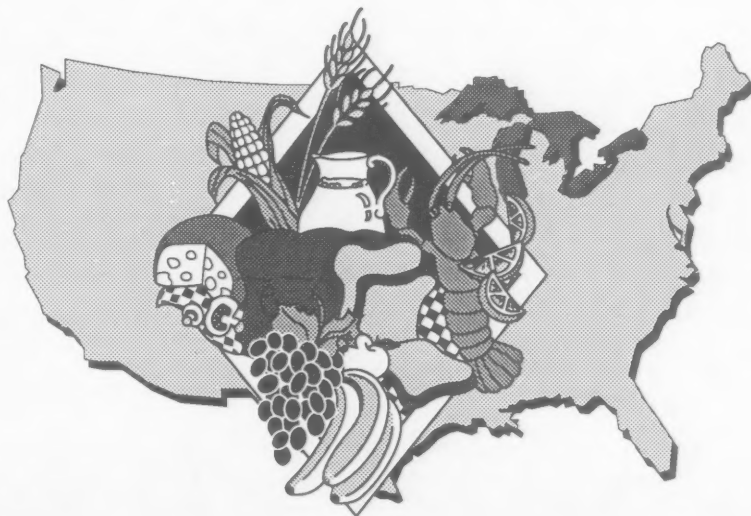
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